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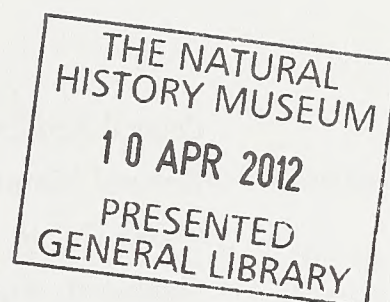
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JOURNAL
2011

March 2012

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The Edinburgh Natural History Society was founded in 1869 and incorporates the Edinburgh Field Naturalists and Microscopical Society, instituted in 1881. The Society was instituted for the study of natural history in all its branches and for the encouragement of public interest and concern in these matters. Council office bearers are elected at the AGM. The President serves for three years, Vice Presidents for two years and Council Members for three years. The Treasurer and Secretary are elected annually.

An indoor talk is held on one Wednesday every month from September to April, in the Guide Hall, 33 Melville Street at 7.30pm. All are welcome. Outdoor excursions are held throughout the year. A copy of the programme for Summer 2012 and details of membership of the Society can be obtained from our website at edinburghnaturalhistorysociety.org.uk

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NATURAL HISTORY ON A PENTLAND HILLS WALK

David Adamson

This walk, following a Pentland Hills circuit that begins at Harlaw and continues anti-clockwise around Black Hill via Black Springs, the Green Cleuch, Loganlea Reservoir and Dens Cleuch was undertaken on 9 August 2011. It was a repeat of one three days earlier with an old school friend and this second was on my own. The paths are well trodden, all being within the Regional Park and with a metalled road from The Howe to Logan Cottage.

From Black Springs the long slanting path on the slopes of Black Hill is bordered by a drystone dyke on its right-hand side. A family of Wheatears would wait on this dyke until I approached, then fly ahead again on the hidden side to land further on. Eventually, having strayed beyond their territory, they flew back, presumably to where they first appeared. On the other side of the path, about half way to the Green Cleuch, I failed to find a small plant of Stagshorn Clubmoss *Lycopodium clavatum* that I had seen three days earlier. Burning of Heather normally destroys clubmosses, and Black Hill has been actively managed in this way for Red Grouse for many years. However, this particular plant should be close enough to the path to avoid the next muir-burn.

Above the Green Cleuch, two large crows passed by on their way to the east. One gave a call that marked them as being Ravens. In the Green Cleuch I found several kinds of bumblebee, including two queens of the Early Bumblebee *Bombus pratorum*. The brief life-cycle of this species had ended by now in Edinburgh gardens, but it seems to persist later into the season in the hills. As well as Meadow Brown, White, Small Heath and Dark Green Fritillary butterflies, there was a group of seven Small Tortoiseshells feeding on Creeping Thistle *Cirsium arvense* beside the anglers' car-park at Loganlea reservoir.



Bombus hortorum

The stretch of tarmac road from Loganlea to Logan Cottage, at the entrance to Dens Cleuch, was not notable for its wildlife, but Dens Cleuch proved to be a rich habitat for birds, plants and insects. The birds of note were Stonechats and Whinchats, both favouring Bracken-covered slopes. A handful of Bog Asphodel *Narthecium ossifragum* and Grass of Parnassus *Parnassia palustris* plants survive in Dens Cleuch, and August is probably the best month to find them in flower. However, for me, the highlights of Dens Cleuch were the insects. A Blaeberry Bumblebee *Bombus monticola* was feeding on Lousewort flowers; nearby was a Common Blue Butterfly, the first I had seen in this part of the hills. Towards the north end of Dens Cleuch are many Marsh Thistle *Cirsium palustre* plants, and these are an ideal place to look for male bumblebees of both the social and cuckoo species. Where the path leaves Dens Cleuch to descend to Black Spring there is a very small and isolated clump of these Marsh Thistles *Cirsium palustre*. Here I found males of the Field Cuckoo Bumblebee, *Bombus campestris*, the Forest Cuckoo Bumblebee, *Bombus sylvestris*, and the Social Bumblebee, *Bombus lapidarius*. The male cuckoo bees had been there three days before, and I found them again on a subsequent visit, suggesting that they find a food source and stay there until the flower season has ended.

Once across the dam at Black Springs, the path leads by the side of the water to a patch of Rosebay Willowherb *Chamerion angustifolium*. Bumblebees seem to like this plant, which may help account for its abundance. There were more Blaeberry Bumblebees, many White-tailed Bumblebees, *Bombus lucorum*, and workers of the Early Bumblebee. I failed to identify one bumblebee that was a very pale colour and may have been an unusual colour form of *Bombus monticola* or, more likely, another *Bombus campestris*.

On the same walk three days earlier I had noted two other bumblebee species, *Bombus terrestris* and *Bombus hortorum*, Ringlet Butterflies and Antler Moths, Larch Ladybirds, Kestrels, Buzzards, A Heron and Meadow Pipits. A lot of wildlife can be found in a walk of under three hours in the Pentland Hills.



Just over a year ago, the ENHS Yahoo news group and Facebook page were launched, with the intention of enhancing our online presence. Both facilities were planned to complement the existing website, which had been successfully established for some time. They were set up principally to help members communicate more effectively with each other across a wide range of issues, and generally to help raise the profile of our organisation. The following report is compiled from material supplied by Malcolm Lavery, Wilma Harper and Ian Mackintosh.

NEWS GROUP

The Yahoo news group is restricted to members and has attracted around 300 emails or 'posts' during the course of the last year. Popular subjects include wildlife sightings of note, alerts about upcoming events or campaigns and offers of, and requests for lifts to excursions. The group can also be a useful way of informing members of short-notice news such as alteration or cancellation of excursion plans. Members frequently post photos on the photo album section (more than 140 to date). Looking back over the past year, subjects that attracted particular interest included the severe winter and the resulting unusual number and variety of birds this brought into gardens. A more unusual topic was the atmospheric phenomenon 'Sundogs', which attracted photos and considerable discussion.

We currently have over 30 members in the news group – roughly a third of the membership who have email addresses and are therefore able to join. It's probably fair to say that a dozen or so of us keep the group going with regular postings, but a steady trickle of contributions from other members appears too, and anyone who wishes to join in is more than welcome: links to both the Yahoo and the Facebook pages are given on the EHNS website home page.

FACEBOOK

The Facebook group also has 30 members. It is an open group: anyone can see it, and anyone with a Facebook account can ask to join. Not all members of the group are members of the Society. Some are former members who have moved away, and some are people with an interest and, we hope, potential members. Pauline King and Wilma Harper are the most active contributors, providing comments and photos on Nats events and links to other relevant bodies such as The Wildlife Information Centre.

As these are experimental initiatives, it is hard to say what direction they will take; online communication is changing all the time, and it is impossible to predict what future trends will emerge. It may be that, as we recruit new and younger members, a greater proportion will be prepared to get involved, as they are more used to online communication as part of everyday life.

WEBSITE

The first instar of the ENHS website was created by Roger Holme in 2004. In 2007 Roger passed the responsibility for the site to Ian Macintosh: he designed its current format and, as webmaster, is responsible for maintaining it, updating as necessary, gathering data on usage (eg the number of visitors) etcetera.

For non-members, the site acts as a kind of electronic brochure, providing detailed information on the society's activities and is intended to be helpful in recruiting prospective members. For members, the website acts as an electronic notice-board. In particular, it gives the schedule of excursions, with the starting point for each specified by a grid reference and a link that provides a pop-up map of the area to be explored. Details are also given of the indoor talks and, if need be, information can be updated urgently ahead of time. In addition, the site provides a gateway to access all manner of relevant digital media.

Content, including photographs, may be contributed by members via the webmaster's email address shown on the site: webmaster@edinburghnaturalhistorysociety.org.uk the webmaster edits suitable material as necessary, eg by formatting tables or scaling photographs. Feedback from members indicates that the site works well and is easy to use. However, its design and functionality are flexible, and the webmaster would welcome any comment or suggestion from members.

Of late, the website's Gallery has greatly expanded, and now comprises more than 200 pictures, recording, the places, people, plants, insects, birds etc seen on our outings. The quality of these pictures is quite impressive, and Ian believes the Gallery is possibly the main future of the site, as it truly illustrates the interests and activity of the society.

It is expected that use of the website will grow as our membership increasingly adopt computer-based communication.

COMMUNITY BEE PROJECT

Helen Macfie

The Community Bee Project (CBP) was created in Edinburgh in response to the current bumblebee population crisis, their loss of habitat and the observation that our public green spaces hold the potential to regenerate that habitat. The CBP is made up of 'friends of park' groups and other City green-space organisations. With a background of many years as a self-employed gardener, and more recently qualified landscape architect, I undertake the role of Project Manager. Because of the scale of landscape action required to restore bee/insect populations, we aspire to encourage the City to play its part. Our main aim at this stage is to raise funds to purchase seed to sow wildflowers in green spaces where they are welcomed by the local community. Additionally, we aim to influence and adapt the current landscape management of public spaces in order to move towards policies that allow biodiversity to develop. Our vision is for wildflowers to be as common a sight as grass, and as a result for the City to enjoy more colour and species diversity.

The project was set up in January 2011 as a non-profit organisation. Twenty local park groups have currently signed up to the project. The CBP acts as an umbrella organisation, bringing green-space groups together to work collectively, to make the most of the available planting window each year. The project is currently focused in Edinburgh: however once development of bumblebee habitat reaches a certain level here, the project aims to transfer these strategies to other urban environments Scotland-wide.

In February 2011 we applied to the ENHS for funding to get the project up and running. We received £200 in March, which we used to buy wildflower seed. The City of Edinburgh Council offered Silverknowes Park as a demonstration site to test the practicalities of establishing wildflowers in amenity grassland. We sowed a 1kg native-seed mix of annuals, biennials and perennials in a 300 square metre area, to replace the existing amenity grass. By doing this, we aimed to create a long-lasting wildflower area with a range of plants to attract wildlife – not just bumblebees, but also butterflies, moths and birds. Perennial wildflowers do best on infertile soils, whereas annuals do well in fertile conditions. The CBP is keen to use perennials in the main, because they will provide habitat year on year, whereas annuals, though popular with the public because of their fantastic show of colour, are management-intensive, requiring to be re-sown each year. The plants in the mix included Yarrow, Cow Parsley, Kidney Vetch, Clustered Bellflower, Greater Knapweed, Teasel, Viper's Bugloss, St John's Wort, Field Scabious, Meadow Vetchling, Birdsfoot Trefoil, Greater Trefoil, Wild Marjoram, White Campion, Red Campion, Hedge Woundwort, Goatsbeard and Mullein.

Ground preparation started at Silverknowes Park at the end of May 2011 and continued over a 6-week period. The area was marked out and sprayed twice with glyphosate to kill off the grass, and the dead grass was then rotovated. The seed mix was sown immediately onto the overturned ground. Ideally, had time and resources permitted, we would have liked to leave the ground for another four weeks after rotovation and then spray again. However, as we wanted to establish the seed that summer, we had to forego this extra period. Public maintenance schemes are often under time and resource pressure, and it was therefore helpful that this constraint enabled us to test out how much ground preparation and maintenance wildflowers require in order to compete with and establish into Rye Grass.

The seedlings took 8-10 weeks to appear. We found that despite the 6-week period of ground preparation, the rye grass had not been fully eradicated in some areas. However, in other areas wildflower seedlings had taken hold, and the next two years will show if they are able to establish fully. We therefore learned from Silverknowes Park that thorough ground preparation is crucial to the success of wildflower establishment, especially in amenity grassland where the vigour of Rye Grass (and other species such as Dock and Buttercup) has to be addressed.

The main challenges to increasing bumblebee habitat in urban green spaces are establishing seed (in rye grass), and thereafter maintaining planting in good condition in order to retain public support. The CBP is working with the City of Edinburgh Council to establish best practice for wildflower establishment in parks, within the resources of the Council and community groups. Increasing bumblebee habitat is certainly achievable; it simply needs to be done well. Establishing wildflowers on brownfield sites would be significantly easier, and is something the CBP is currently considering.

The CBP has recently raised £500 which will go to two park groups who are members of the project. Establishing wildflower areas through these groups gives confidence that the wildflowers will be well received by the local communities and that there will be volunteers to manage the planting.

It is not enough to plan wildflower areas merely in the hope that that will increase the bumblebee population. As well as creating aesthetically pleasing schemes we have to ensure that we are actually benefiting the insects themselves. Similar projects have been undertaken in England, and studies have shown that bee populations have responded well to increased habitat diversity. Nevertheless, we should validate our approach in local environments: ideally, we should carry out a count of the bee population before and after creating the schemes. Obviously this will need funding, volunteers and careful organisation to ensure scientifically valid results. Regrettably, at this stage we do not have sufficient resources to follow through on this aspect as we would wish.

The Society was the first to provide funding for the project, and we would like to thank its members for their support and for their faith in our project. The support we receive helps us secure further funding, so that we can continue to increase bumblebee habitat and aid these crucial pollinator species.

SALMON TAGGING

Neville Crowther



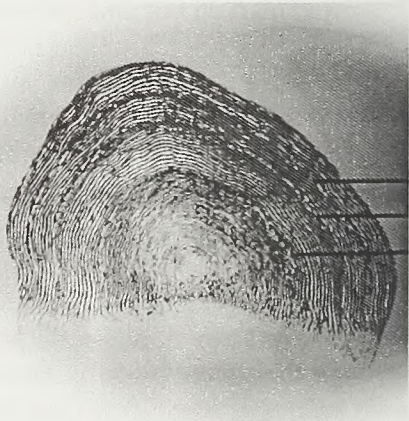
Many fish are well known for long migrations between their spawning grounds and their feeding areas. The life story of the Common (or European) Eel, born in the Sargasso Sea and swimming as an elver up our rivers, is almost as well known as the behaviour of the Atlantic Salmon, whose story is the antithesis of the Eel's.

By a happy coincidence, on two of this year's excursions we had a reminder of the migratory behaviour of the Salmon, the fish that is almost synonymous with Scotland. On our visit to the Hermitage at Dunkeld, in late September, we watched dozens of Salmon leaping, often unsuccessfully, to bypass the Falls of Braan. A month earlier, our walk at Paxton House, coincided with one of the tagging days organised by the Tweed Foundation to monitor salmonid populations

and exploitation levels. These tagging days are held annually, at different sites on the river. We spent an hour or more watching the process. The two species being monitored are Atlantic Salmon and Sea-trout. These two are close relatives: Salmon is usually larger and can be distinguished visually by the forked end to its caudal fin.

For Salmon, the first year of growth after hatching takes place in the natal river system. Subsequent years, sometimes up to age five, are spent in marine areas, especially around Greenland before the Salmon returns to spawn. By contrast, Sea-trout return to spawn, on average, in five successive years. Homing behavior has been shown to depend on olfactory memory, and legend has it that the fish return to spawn at the exact spot where they were born. Their recolonisation of rivers that have been cleaned up, however, may indicate that this is not always the case.

Using the established capture/mark/recapture procedure (as employed for birds and small mammals), the main objectives of the salmonid tagging on the Tweed is to establish the proportion of tagged fish that are subsequently caught by anglers and thereby to assess both exploitation rates and the total river population. This information is vital for the angling industry, which relies upon the conservation of numbers to maintain its viability. With salmonids, two types of tag are in use: a numbered tag attached to the base of the rays of the dorsal fin and an acoustic tag implanted surgically which can be detected electronically without the need for recapture.



Salmon scale

The fish are caught in a traditional fashion by a suspended net towed by a rowing boat. During the capture, tagging and examination process, there is a strong emphasis on avoidance of causing stress to them. They are placed in shaded, oxygenated keep-tanks filled with recently taken river water, to which has been added a mild anaesthetic. In addition to tagging, the handlers record biometric data, including:

Sex	At spawning time, male Salmon have a hooked lower jaw, which is distinctive.
Length	After one winter at sea, salmon lengths range from 55 to 65cm. After two winters, lengths range from 70 to 85cm.
Age	Age is determined from the growth rings on scale samples.
Parasites	Soon after entering freshwater, sea lice fall off leaving a small bloody wound. Nematodes cause cloacal damage, This evidence is noted.
DNA	DNA is obtained from tissue samples a recent addition to the investigations being undertaken.

Rapid processing is followed by a gentle return to the river. This allows the fish to continue their progress towards the spawning shallows in the upper reaches.

Returns show that about 6% of tagged fish are subsequently caught by anglers on the Tweed. Most of the remainder, male and female, die after spawning.

Further information is available on <http://news.rivertweed.org.uk>

INTERACTION BETWEEN *MULLUS SURMULETUS* AND *DIPLODUS VULGARIS* A NEW EXAMPLE OF SYMBIOSIS?

Vladimir Krivtsov

Last autumn, on holiday in Majorca, I was enjoying snorkelling off the coast of S'Illot and Punta de n'Amer. I regularly saw quite a number of different species of fish, algae and invertebrates and even had two encounters with octopuses.

Two very common fish species were Striped Red Mullet *Mullus surmuletus* and Two-Banded Sea Bream *Diplodus vulgaris*. These fish have quite different feeding habits. Both eat small invertebrates, but the sea bream is well equipped to pick them off the rock surface, while the mullet uses a pair of long chemosensory barbels hanging from its chin to scout through the seabed sediments in search of a meal.

One day I saw something really interesting; it looked as if one particular mullet was hanging out with one particular sea bream. The sea bream was rather slow, monotonously picking food from the rocks. The mullet, however, appeared rather more investigative and energetic. It swam a lot, and would leave the sea bream and wander, sometimes quite far off, to investigate the surrounding areas. Inevitably, however, it always came back to the sea bream. When the two fish were together, the mullet preferred to position itself at a lower level: it appeared to be benefiting from the increased concentration of invertebrate food falling off as a result of the activity of the messy sea bream. That process was steady but rather slow, and it appeared that the impatient mullet was letting the food accumulate while it made short raids into the surrounding territories. I watched the process for more than half an hour, and the fish appeared to keep together more than 60% of the time.

I think this behaviour can be described as symbiotic, and, as there appears to be neither benefit nor harm for the sea bream, it may be classified as commensalism. Admittedly, I've not heard of nor seen anything like this, before or since, and it may have been a one-off occurrence. It may, however, prove to be the beginning of the evolutionary development of a new ecological interaction. I would, therefore, be interested to hear from anyone who knows of any other case of this kind of relationship.

ARCHIVES

KathyBuckner

Some of you may recall that, back in 2008, ENHS Council agreed to let the Natural History Museum in London digitise some early precursors of the ENHS Journal as part of the Biodiversity Heritage Library Project. Two early volumes are now online and can be found as follows:

Edinburgh Naturalists Field Club 1881-1886

<http://www.biodiversitylibrary.org/item/26215>

Scottish Natural History Society 1898-1902

<http://www.biodiversitylibrary.org/item/44154>

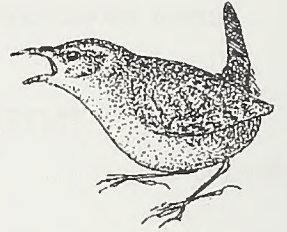
You can view them online (which is a bit tedious) or download them as PDFs or in versions for e-book users. I've downloaded one of them to my Kindle.

They make interesting reading. Happy browsing

CBC AT VOGRIE AND ROSLIN GLEN

Neville Crowther, Lesley Fairweather, Kevin Ingleby

Attempting to assess trends among breeding birds using data from only one site is unreliable. However, in Midlothian, we are fortunate to have two quite similar local sites that are surveyed annually by ENHS members and others. Vogrie and Roslin Glen are both riparian, broadleaved woodlands, at the same altitude and only 7 miles apart. Thus it can be assumed that, if the annual results from the two sites are similar, they may give a more reliable picture of general trends.



As readers will know from the article Breeding Birds at Vogrie in the 2009 Journal, a Common Bird Census (CBC) site receives either ten or 11 census visits per breeding season by one or two surveyors. Indicators of breeding are plotted on maps for all species seen. At the end of each season, all these 'registrations' for each species are transferred to a master map. Clusters of registrations then indicate the presence..of..territories



Annual results for 2003-2011 are shown in the accompanying Tables. The areas from which the breeding-bird densities are calculated are: Vogrie 14.8 hectares and Roslin 18 hectares. The differences in densities at the two sites are due mainly to Roslin being entirely full-canopy woodland with understorey, whereas Vogrie is only partly so, with scrub and grassland accounting for about half the area. The figure of c.2000 pairs per sq km at Roslin places it among the richest broadleaved woodland sites.

In the 2011 season, since the two preceding winters had been cold, after a string of mild ones, it was perhaps expected that some species might exhibit reduced breeding numbers. It has also been our impression that parts of the 2009 and 2010 breeding seasons had been both cool and wet, which might mean species would have had mixed fortunes, depending on the timing of their incubation and fledging, and on..the..availability..of food.

We think the following short-term trends have been noticeable at both these Midlothian sites:

- The total numbers of territories have declined, but there has been a slight overall increase since 2010, recapturing some of the lost ground from the 'better' years around 2006.
- The most noticeable declines are among the smaller resident passerines like Wren, Robin, Chaffinch, Blackbird and Song Thrush, although tit families have maintained their numbers.
- Some summer breeders such as Blackcap and Chiffchaff are up at both sites. Warblers, of course, avoid our winters by migrating. At Roslin, Spotted Flycatchers are holding up well, whereas in other parts of Midlothian they appear to be in decline.
- The resident species with larger body-masses seem to be little changed in number. Presumably they survive poor winters better by having larger stored-food reserves as body fat. At Roslin, newly arrived resident Nuthatches are increasing and appear to survive the winter by visiting local garden feeders.

Longer-term trends can be seen in our results, which conform with other census data over the same period. These include declines in Yellowhammer and Willow Warbler and increases in Great Spotted Woodpecker and, as mentioned above, Chiffchaff and Blackcap.

Further analysis is difficult without a much larger data set. Sadly, the BTO, who ran the UK-wide CBC programme for 40 years, ceased funding and clerical support, about ten years ago, and many of the original volunteer survey teams are now disbanded.



Our thanks go to two other Nats: to Chris Macefield for field-work and to Betty Smith, for mapping advice. Betty and her late husband Bob were two of the earliest CBC surveyors in Scotland at Roslin Glen. The Smith contribution was continued for several years by Mike Betts and David Grundy, to both of whom acknowledgement is also due.

Roslin Glen SWT Reserve 2003-2011

SPECIES	STATUS	BREEDING PAIRS								
		2003	2004	2005	2006	2007	2008	2009	2010	2011
Sparrowhawk	B		1					1	1	1
Buzzard	B	p	2	2	p	p	p	p	p	p
Kestrel	B		p		p			p	1	
Pheasant	B					p	p	1	2	7
Stockdove	B	5	5	3	2	1	3	4	8	5
Woodpigeon	B	10	10	8	7	6	6	12	7	8
Tawny Owl	B	1	1	1	p	p	p	1	1	p
Green Wpecker	B	1	1	1				1		
Gt Sp Wpecker	B	2	3	5	5	4	5	3	8	6
Swallow	S	p	p	p	p	p	p	p	p	p
Grey Wagtail	V								p	p
Dipper	B					p	p	p	1	1
Wren	B	45	51	49	65	53	61	54	40	42
Dunnock	B	7	7	6	7	7	9	10	3	8
Robin	B	36	30	43	40	43	40	42	36	30
Blackbird	B	33	31	32	28	33	28	28	34	30
Song Thrush	B	9	10	14	15	14	18	17	12	8
Mistle Thrush	B	2	1	p	p	p	2	3	2	1
Whitethroat	B		1	p	p	p	p	p	p	p
Garden Warbler	B	1	2	1						
Blackcap	B	14	17	13	12	12	11	12	17	24
Chiffchaff	B	6	9	10	7	10	17	12	19	28
Willow Warbler	B	11	8	4	6	3	3	3	4	4
Goldcrest	B	2	3	2	4	4	3	p	1	6
Spotted Flycatcher	B	3	3	p	p	p	3	1	3	4
Long-tailed tit	B	p	3	2	1	p	2	4	4	3
Coal tit	B	7	8	6	6	8	10	13	13	17
Blue tit	B	54	51	67	59	53	59	44	52	60
Great tit	B	25	34	36	35	34	36	31	38	45
Nuthatch	B								1	4
Treecreeper	B	4	7	5	4	4	7	3	5	6
Jay	B						1	p	1	1
Magpie	B	1	1	p	2	1	p	1	2	3
Jackdaw	B	2	0	1	1	2	1	1	4	4
Carrion Crow	B	4	4	5	3	3	2	2	3	2
Starling	B						2	6	6	2
Chaffinch	B	60	56	67	69	73	67	70	55	58
Greenfinch	B	6	1	4	5	3	3	4		1
Goldfinch	B	3	3	4	2	3	10	6	12	7
Siskin	B								4	
Bullfinch	B	5	6	6	4	4	7	6	5	8
Yellowhammer	B		1				2	p	p	p
Tree Sparrow	B				1					
Swift	S		p		p	p	p	p	p	p
Raven	V							p	p	p
TOTALS										
Territories		359	371	397	390	378	418	396	405	434
No of species breeding		28	32	27	25	23	28	30	34	32
No.species also present		3	3	5	8	10	8	10	7	8
Total species		31	35	32	33	33	36	40	41	40
Breedingdensity prs/sq.km		2010	2062	2200	2184	2101	2340	2212	2268	2430

Vogrie Country Park 2003-2011

SPECIES	STATUS	BREEDING PAIRS								
		2003	2004	2005	2006	2007	2008	2009	2010	2011
Grey Heron	V	p	p	p			p	p		
Mallard	B	p	1			1		p	p	p
Buzzard	B	1	1	2	1	2	2	2	1	2
Sparrow Hawk	B	1	1	p	1		1	p		
Kestrel	B	p	1	p	p					
Pheasant	B	4	3	3	3	4	4	2	p	3
Oystercatcher	O		p						p	
Woodcock	B	4	3		2					
Wood Pigeon	B	6	7	6	4	3	5	9	7	6
Stock Dove	B				p	1				
Tawny Owl	B	2	1		p	1	1	1		1
Swift	V		p		p					p
Green W'pecker	V									
Gt. Sp. W'pecker	B	1	1	2	2	2	1	3	2	4
Swallow	V			p	p	p		p	p	p
House Martin	V	p	p	p	p	p				p
Grey Wagtail	V	p						p		
Dipper	B	p	p	p			1	1	1	p
Wren	B	24	27	25	32	26	27	23	14	17
Dunnock	B		1	1	2	p	p		p	
Robin	B	13	15	17	12	15	13	14	5	6
Blackbird	B	10	8	8	9	8	12	10	7	7
Song Thrush	B	3	4	6	4	4	2	4	4	1
Redwing	W	p							p	
Fieldfare	W									
Mistle Thrush	B	2	p	3	p	2	2	1	1	1
Whitethroat	B	1	1	1	1	p	1			
Blackcap	B	6	6	8	9	9	3	9	4	11
Garden Warbler	B	1	2	1	3	2	1	3	p	p
Chiff Chaff	B	5	8	3	5	6	10	9	4	12
Willow Warbler	B	7	5	8	9	8	5	8	5	7
Goldcrest	B	1	3	2	3	2	3	2	2	1
Spotted Flycatcher	B		p							
Long tailed Tit	B	1	2	2	2	2	3	3	3	1
Coal Tit	B	2	2	4	3	2	3	p	2	2
Blue Tit	B	7	7	8	7	6	5	6	6	8
Great Tit	B	3	8	6	7	5	4	4	5	6
Tree Creeper	B	1	2	p	2	1	2		1	2
Jackdaw	B	p	p	p				1	p	p
Carrion Crow	B	1	1	p	p	1	p	1	1	p
Magpie	V					p	p	1	1	1
Starling	B		p	1						
House Sparrow	V									
Chaffinch	B	15	22	22	32	23	23	28	19	21
Siskin	B	p			p	1			1	1
Greenfinch	B	p	1	p	1	p				
Goldfinch	B	1	p	p	1		p	p	p	p
Linnet	V				p					
Redpoll	V									
Bullfinch	B	2	1	2	1	1	1	p	p	1
Yellowhammer	B				p					
Jay	B			1	1		p	p	1	1
Cuckoo	V			p						
Goosander	V			p						
Sand Martin	V			p						
Pied Wagtail	V					p				
TOTALS										
Territories		125	145	142	159	138	135	145	97	123
No of species breeding		27	29	24	27	26	25	23	23	24
No.species also present		10	10	14	11	7	6	9	10	9
Total species		37	39	38	38	33	31	32	33	33
Density prs/sq.km		844	979	959	1060	932	912	979	655	831

Abbreviations

B = breeding, V = Using the site for feeding or too few registrations for confirmation of territory
W = winter visitor O = overflying p = present

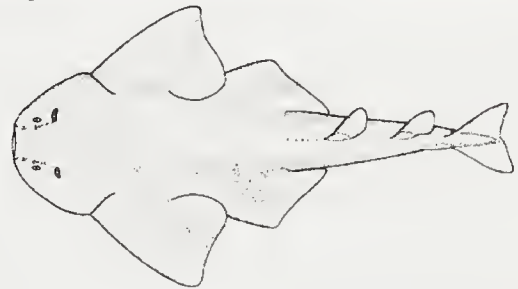
ANGEL SHARK PRODUCES 19 YOUNG

Tom Delaney

Angel Shark is a species I don't remember ever having heard of before, and so, when, in November, Deep Sea World in North Queensferry announced that, in their aquarium, for the first time in captivity an Angel Shark had given birthto 19 young!..... I imagined it to be some exotic tropical creature. However, having learned from the Press coverage that it had formerly been abundant in British waters but by 2005/6 had become extinct in the North Sea, I was keen to see what more the internet had to say about the species.

Its common name seems to derive from the wing-like appearance of its pectoral fins. As for its biology and ecology, Wikipedia (http://en.wikipedia.org/wiki/Squatina_squatina) provides many pages of information, including: 'it is a nocturnal ambush predator that buries itself in sediment and waits for passing prey, mostly bony fishes but also skates and invertebrates.'

Like other sharks, it is viviparous, giving birth to a relatively small number of well developed young after a relatively long gestation period in the womb. These 19 births occurred over a 3-week period. This was described, eye-wateringly, in Deep Sea World's Press release and in the media as a 3-week labour! Fortunately, however, from movies taken of the process, the births seem to have been quite effortless on the part of the mother, the young seeming to swim free when they were ready to do so.



The Angel Shark's form of live birth is termed 'aplacental viviparous': the young hatch inside the mother's uterus and are nourished by a yolk sac until birth. In most sharks, yolk formation begins with pregnancy: in the Angel Shark, however, its onset is delayed until halfway through gestation. The gestation period is 8–10 months, with ovulation in spring and birth in winter, though this may vary across its geographical range. Females bear litters of 7–25 pups every other year, the newborns measuring 9–12 in long.

As regards its conservation status, IUCN <http://www.iucnredlist.org/apps/redlist/details/39332/0> has it down on its Red List as Critically Endangered: 'it was formerly a common and important demersal what does this mean JM predator over large areas of its coastal and outer continental-shelf- sediment habitat in the Northeast Atlantic, Mediterranean and Black Seas. Most of this region is now subject to intense demersal fisheries, and the species is highly vulnerable from birth onwards to bycatch in the trawls, set nets and bottom longlines operating through most of its range and habitat'..... 'its abundance has declined dramatically during the past 50 years'..... 'it has been declared extinct in the North Sea and has apparently been extirpated from large areas of the northern Mediterranean. It is now extremely uncommon throughout most of the remainder of its range.'

Considering what has happened to just this one species, which has gone from abundant to extinct during our lifetime, I wonder just how much destruction of biodiversity has gone on, out of sight, beneath the waves, but just beyond our shores. What has been the ecological impact? How much of the damage is irreversible? To what extent is the sea capable of regenerating what has been damaged?

Footnote: The cod which used to be abundant around Cape Cod were fished out and have never returned. As I understand it when a top predator goes something else replaces it and it may never get back. It's pretty well known what enormous damage is being done by 'factory' fishing all over the world. One of the reasons that seabirds are doing relatively well in the Forth is because the only fishing is from small boats, mainly for lobsters and crabs.

Jackie Miscott

FORTH ISLAND SEABIRD COUNTS 2011

Bill Bruce

As usual, the weather did its best to keep us on our toes again this year, with rough weather making us rearrange several trips. Our trip to Inchkeith will be remembered by some for all the wrong reasons. We went out in a stiff breeze which increased steadily during the day. By lunchtime the waves were crashing against the rocks, and the spray was blowing over the top of the cliffs. Thankfully, the Force 7-8 gale didn't prevent our boat returning to pick us up, and we were able to return to Granton through the biggest waves we have ever seen on one of these trips. Surprisingly, the next day the seas had calmed down, and we were able to do our count on Craigleith.

At the start of the year, the intention had been to try and do another count of Puffin burrows on Craigleith and Fidra. However, by April, the researchers on May Isle were telling us that Puffins were starting to breed earlier than usual and that our planned date in early May was going to cause too much disturbance. It was therefore decided that these counts should not take place. The Scottish Seabird Centre's SOS Puffin Project consider that the Puffins are continuing to do well on these two islands.

Here is a brief summary of our results for the species we counted this year:

Fulmar: Although the numbers on the different islands varies year to year, the total number of breeding birds has remained stable over the last three years.

Cormorant: Over the years numbers of breeding Cormorants rose to a peak in the mid 1990s. Numbers then dropped so that by 2010 they were roughly half of that peak figure. This year, numbers have increased slightly (+13%), with the biggest increase being on Lamb.

Shag: The breeding pattern on our islands seems to be a steady increase in breeding numbers until a peak is reached. This is followed by a crash over the winter and then numbers increase again over the next few years. The recent crashes have been in the winters of 1992-3 and 2004-5. Since then, numbers have been on the increase by an average of approximately 7% each year.

Greater Black-backed Gull: This species seems to favour Craigleith (23 pairs) and May Isle (41 pairs) while Inchkeith (7 pairs), for some reason, is less popular. Over all islands, numbers are up again this year. Comparing the counts since 1994 (the first year where we have figures for all islands) there has been a steady increase which averages out at approximately 9% per year.

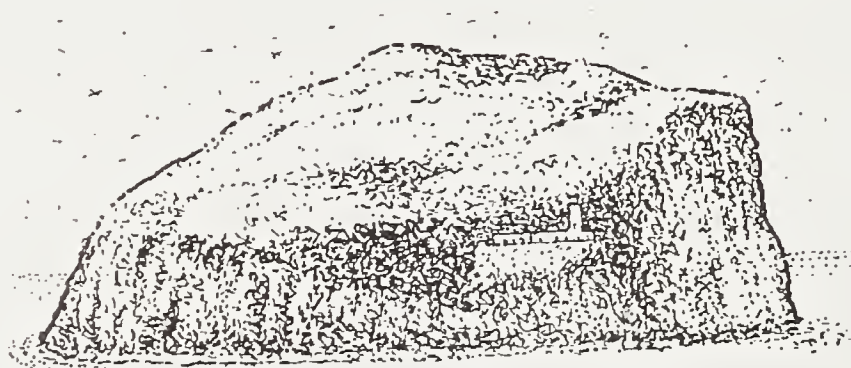
Kittiwake: Last year there was an increase in breeding numbers on all islands except Fidra, where they remained virtually the same. This year, every island except Lamb saw a drop in numbers. Overall numbers were down by 20%.

Terns: Last year was a poor year for terns on May Isle, with only 17 pairs of Common Tern and 34 pairs of Arctic Tern attempting to breed. This year these species did a lot better, with 26 and 250 pairs, respectively. At the time of writing there have been no reports of Roseate Tern breeding on the Forth islands.

Razorbill: This is the second year that this species has seen an increase (up 8%). Most islands show an increase, apart from Fidra and Inchkeith, where numbers have fallen.

Guillemot: The number of birds on the breeding ledges peaked at 37,800 birds in 2001. Since then, they have dropped so that in the last five years we have counted 21,000-24,000 birds. This year compared to last, numbers are slightly down (-7%).

I am grateful to the Forth Seabird Group and Scottish Natural Heritage for allowing the use of their data.



Summary

Species	Count	Bass Rock	Craigleith	Lamb	Fidra	Inchkeith	Carr Craig	Inchcolm	Haystack	Inch- mickery + Cow & Calves	Inch Garvie / Forth Bridge	Long Craig	May Isle	Totals
Fulmar	AOS	43+	174	13	182	205	0	261	0	32	243	0	306	1459+
Cormorant	AON	0	60	72	0	77	72	0	0	0	0	0	0	281
Shag	AON	25	281	66	191	186	15	15	0	62	0	0	505	1346
Gannet	AON	x	0	0	0	0	0	0	0	0	0	0	0	x
Eider	AON	5	x	x	x	x	0	x	0	28+	52	x	x	85+
G B-b Gull	AON	1	23	1	1	7	1	1	1	1+	1	0	41	79
L B-b Gull	AON	2	x	x	x	x	9	x	10	x	35	0	x	56+
Herring Gull	AON	0	x	x	x	x	44	x	8	x	222	0	x	274+
Kittiwake	AON	313	542	140	204	306	0	82	0	0	0	0	2,685	4272
Common Tern	AON	0	0	0	0	0	0	0	0	0	0	x	26	26+
Arctic Tern	AON	0	0	0	0	0	0	0	0	0	0	0	250	250
Sandwich Tern	AON	0	0	0	0	0	0	0	0	0	0	0	0	0
Razorbill	pairs/sites	94	185	70	108	63	0	14	0	0	0	0	2705	3239
Guillemot	birds on cliffs	c2000	1705	2040	332	133	0	0	0	0	0	0	15,691	c21901
Puffin	birds	c6	1830	x	400	413	0	14	0	30	0	0	x	2693+

AON=Apparently Occupied Nests; AOS=Apparently Occupied Sites; x=Species is breeding but was not counted; 0=Species is not breeding

GRAYLING BUTTERFLY IN LOTHIAN AND EASTERN BORDERS

Tom Delaney

The Grayling is a betwixt-and-between sort of character in the butterfly world. Although it is one of our larger species, it is not especially showy. In flight it is quite noticeable and distinctive but seems to spend less time flying than most other species and more time perched, inconspicuous, on vegetation or on the ground. The Grayling rests with closed wings, and it is said that it sits facing the sun to cast no shadow. In this way, it may be less often noticed by predators and lepidopterists. In contrast to the bright, colourful finery of Peacock, Red Admiral and Small Tortoiseshell, its disruptive pattern and muted shades work to conceal rather than reveal, but, close up, it shows itself to be really pretty. Also on the positive side, it is quite amenable to a close approach and doesn't seem to mind having its photograph taken.

Despite its charms, the Grayling shares with a number of other species (Meadow Brown, Grizzled Skipper) the burden of rather a dreary name, and, although it is not one of our commonest butterflies, it does not have quite the cachet associated with species that are scarce (Large Heath), are hard to find (Purple Hairstreak), or are newcomers to our area (Speckled Wood, Holly Blue, Small Skipper).



At Meadowmill 2011

Perhaps as a result of these characteristics, its distribution and population in Lothian and Borders are not all that well known. Are its numbers increasing or declining? Is its range expanding or retreating? Is it restricted to known, traditional sites, or is it breaking new ground? In the face of these unknowns, there seems to have been a resurgence of interest in the species locally, with several reports on lothianbirdnews: and one morning this year, at one site there were exactly as many watchers (eight) as there were Graylings.

According to the field guides, its habitat in coastal areas includes dunes, saltmarsh, undercliffs, and clifftops. Inland, colonies are found on dry heathland, calcareous grassland, open woodland, stony ground, old quarries, earthworks, derelict industrial sites such as old spoil heaps. It likes dry, well-drained, open areas with sparse vegetation and plenty of bare ground.

According to the National Biodiversity Network, its range in Scotland includes most of the east coast as far north as the Moray Firth. (Many Nats will remember the excursion to the Seaton Cliffs SWT Reserve near Arbroath on 10 July 2009: there were four Graylings in the morning and two more in the afternoon.) Butterfly Conservation say the species is declining in many areas, and it is a UK Biodiversity Action Plan Priority Species.

I first saw Grayling several years ago on Arthur's Seat. According to the Historic Scotland Ranger Service it occurs there every year. Blackford Hill is another regular site, but apparently in small numbers only.

As a first step in trying to learn more, I have started this winter to collate records of its occurrence in the region, and the results so far are tabulated below. Clearly these are somewhat sparse at this stage. Though the Table is still embryonic, it does highlight some sites in our area where the Grayling has been found year after year in the kinds of natural habitat detailed above. Blindwells on the other hand (derelict, industrial, old-spoil-heap habitat) may be a newer site, colonized only since its use associated with coal-mining was abandoned but clearly holding a thriving population. The Table also seems to indicate quite strongly the period, mid-July, when peak numbers are recorded: eg 45 at Fairy Glen in 2006 and 30+ this year at Blindwells.

Graylings have a long-standing presence on Arthur's Seat: in addition to the above data, the Historic Scotland Ranger Service (HSRS) have 72 records for the period covered here. There are two records in August 1999, a blank period and then records in every year from 2005 until the present. Almost all are in July and August, but the earliest records were 23 June in 2009 and 28 June in 2006 and 2010. (Not far away, there is an even earlier date....16 June in 2004 at Millerhil

Table 1 Some Grayling records in Lothian and Borders 1999-2011

	Date	Place	Grid ref.	No.	Observer	Notes
1999	July, week 3	Blackford Hill	NT254705	1	ECR	
2000	July, week 3	Blackford Hill		2	ECR	
2004	July, week 3	Blackford Hill		3	ECR	
2005	27 June	Blindwells*		a few	BH	1 st record here
2005	2 July	Lumsdaine Dean	NT862693	5	NC	
2005	July, week 2	Blackford Hill		2	ECR	
2005	July, week 3	Blackford Hill		1	ECR	
2005	July, week 3	Blackford Glen	NT253703	2	ECR	
2006	3 June	St Abbs	NT917684	4	NC	
2006	14 July	Fairy Glen	NT7169	45	NC	
2006	31 July	Blackford Hill		1	ECR	
2008	16 Aug	Fairy Glen	NT7169	3	NC	
2009	5 Aug	Blackford Hill		1	ECR	Probable
	11 Aug	Blackford Hill		1	ECR	
2011	28 June	Blindwells		1	BH	
2011	1 July	Blindwells		6	BH	
2011	3 July	Blindwells		15	BH	
2011	5 July	Blindwells	NT412745	10	AM	egg-laying observed
2011	13 July	Blindwells		30+	BH	
2011	19 July	Millerhill	NT323702	?	per TWIC	
2011	23 July	Blindwells		15	BH	Mating
2011	3 Aug	Meadowmill	NT323702	8	TD	
2011	15 Aug	Blackford Glen		1	ECR	
2011	no date	Regent Road		1	BH	
2011	no date	Old Preston- pans mine site	NT401739	?	per BH	

*numbers have been seen at the Blindwells site most years since 2005, with a peak in 2011, and note the mating record on 23/7/2011.

The latest sightings were 2 September in 2010 and 3 September in 2008....all singles. In fact, most records here are of singles, though there are a few twos, threes and fours, a couple of sixes and sevens and one ten. The highest count is of a remarkable 30+ on 13th July 2009 (from the Table, a surprisingly lucky and coincidental date, it would seem, both in this year and in 2009).

The Wildlife Information Centre (TWIC) also has provided a large number of records, mainly from St Abbs Head NNR and the Berwickshire coast, and also running from 1999 to 2011. The earliest dates in that area were (interestingly) 16 June in 2004 and 26 June in 2000 and 2006.) There seem to be no September records for this area.

Both the HSRS and TWIC sets of records contain quite a lot of further detailed information and will repay further analysis. I am keen to continue the investigation and should be pleased if anyone who can provide further records from previous years would send details to: t.delaney2@btinternet.com.

As for 2012, what about putting a note in the diary to have a look in suitable habitat about the middle of July?

Records were contributed by: ECR= Edinburgh Countryside Rangers; BH= Bryan Hickman; NC= Neville Crowther; AM = Abbie Marland; TD= Tom Delaney; TWIC= The Wildlife Information Centre, to all of whom we convey our thanks.

Footnote: Natalie Todman of the Historic Scotland Ranger Service, writes: In Holyrood Park, we have three Butterfly Monitoring Scheme transects: they have been running for many years, and we have gathered a lot of data, which are currently being analysed. Grayling records may be summarised as follows:
Rock Trap and Radical Road: (established in 2002) recorded in good number in every section
Dunsapie: (established in 2002) small numbers most years in the sections on the south side by the cultivation terraces and on the east side of the loch
Hunter’s Bog: (established in 2005) recorded in fluctuating numbers along the whole length of the transect

THE WILDLIFE INFORMATION CENTRE FOR LoTHIAN AND BORDERS

Graeme Wilson

The Wildlife Information Centre (TWIC), based at Vogrie House, is the biological-records centre for the Lothians and the Scottish Borders. The Centre is a not-for-profit company with charitable status which, as a 'one-stop shop', provides an objective, independent wildlife-information service for people and organisations from all sectors. A focal point for biological recording, TWIC is working to increase our knowledge of the land, freshwater and marine wildlife throughout the Lothians and the Borders. The Centre provides a wide range of data services, routinely supplying data to local authorities for screening planning applications, to consultants for preparing environmental assessments and to conservation bodies for writing management plans. TWIC is funded through grant aid from Scottish Natural Heritage and other grant-giving bodies, by Service Level Agreements with various statutory and non-statutory bodies and from income generated by providing data to consultancies.

TWIC works closely with a number of organisations and individuals and has data-sharing agreements in place to ensure that TWIC has as much verified information as possible and that these organisations and individuals receive information that TWIC has that they might not otherwise be aware of. TWIC also works closely with a wide range of volunteers and actively encourages the public to get involved with recording wildlife. Although TWIC is happy to accept ad hoc records, it is important to target surveying effort on specific sites or specific species. This is done in several ways.

Recording outings are organised at specially chosen locations from spring through to autumn. At these sites, as many species as possible are recorded during the day. These outings are attended by a variety of individuals, from experienced recorders through to those who are looking to expand their identification skills. The sites are chosen to benefit our partner organisations. For example, a site may be a proposed Local Biodiversity Site (LBS) where there is a lack of species data. Recording outings can gather enough data to allow the site to be assessed and added to the local authority's LBS list.

TWIC also carries out public surveys. The current survey is gathering data on the distribution and population numbers of the Hedgehog in the Lothians and Borders. The UK Hedgehog population has shown a significant decline in recent years, with one study showing a 25% decrease between 2001 and 2004. As a result, in 2007 Hedgehog was listed as a Priority Species on the UK Biodiversity Action Plan. Its status in the Lothians and Borders is not well documented: the purpose of the survey is to increase the availability of data so that we can monitor future change. The survey is still under way: various methods of collecting data have been used: a poster campaign, distribution of postcards for people to send records in and on-line recording. As a result, there is already a better understanding of the Hedgehog's local distribution.

Surveying effort is also encouraged through workshops that TWIC organise for the public. These may be to train volunteers in habitat-surveying or species-identification skills. Workshops may be run at any time throughout the year, and so it is always worth checking TWIC's website for the most up-to-date information.

TWIC also has a role in raising public awareness of biological recording and providing a platform for interested people to assess and share information about biological recording. TWIC does this in several ways: for example, we hold a conference twice a year to give like-minded people the chance to come together and listen to presentations on a wide range of wildlife-related subjects, and to meet and discuss relevant issues.

TWIC also has a strong online presence: in addition to our well used website (due to undergo a facelift in 2012), we have a Facebook page and a Twitter account. These let a wide audience know what TWIC is, what is happening and how they can become involved. The most recent development is the launch of TWIC's new discussion forum in December 2011. Details of all these, plus latest news and events, can be found at www.wildlifeinformation.co.uk.

WETTER AND WETTER RAINFALL IN CORSTORPHINE IN 2011 AND RECENT TRENDS

Munro Dunn

Only three years after the record high of 974mm in 2008, rainfall in Corstorphine in 2011 at 952mm was almost as high, and the second highest in a run of 46 years. Of the ten wettest years in this sequence, five have occurred in the last ten, ie 2002 to 2011.

While the first half of January 2011 was quite wet, very little rain at all fell in the second half, so that the total fall was close to the January average. February, on the other hand, had more than double its normal rainfall, although 70% of this fell

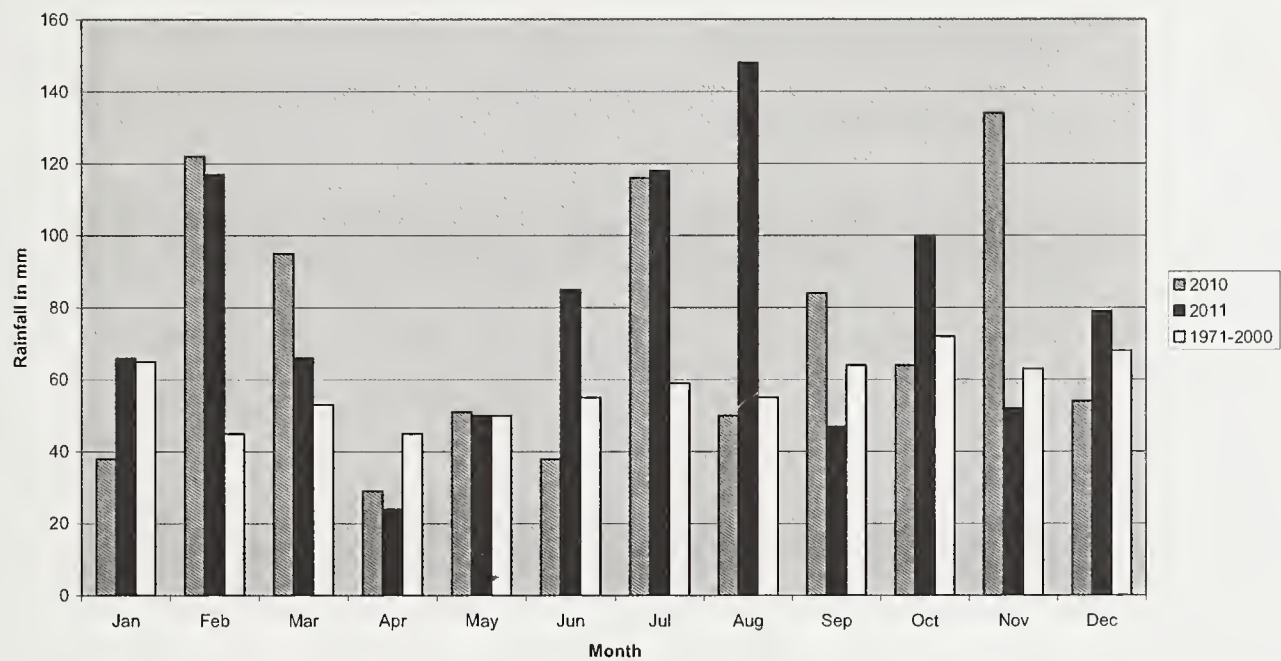
between the 3rd and the 11th. March was slightly wetter than average, but the first and third weeks were completely dry, whereas 75% of the month's total came in the second week.

April is normally the driest month of the year. April 2011 was no exception, with only 24mm, little over half the average. This was followed by a typical May and a wetter than average June, the latter attributable to an exceptional fall of 45mm on the 21st.

July started and finished dry, but rain fell on almost every day from the 6th to the 22nd, with 43mm over the 8th and 9th and 26mm on the 16th. This resulted in a monthly fall of about twice the normal. With 30mm on the 6th, 49mm on the 10th and an almost complete lack of dry days, August ran up nearly three times the average fall. September brought some relief from the high rainfall of the previous three months. A significant amount of rain fell on 19 days, but no day was significantly wet, and the total of 47mm was 25% below average.

There was, however, a 25% excess in October, with frequent small falls again, but 18mm on the 1st and 31mm on the 17th. Rainfall in November was well below the month's normal level until the last five days, when 30mm fell. Finally, only five days in December were without rain, but no substantial falls occurred, so that the eventual excess was only 15%.

Comparison of rainfall



Over the past 40 years, rainfall in this area has been increasing, but rainfall in 2008 and 2011 has been well above this long-term trend. This contrasts with a downward trend in the records for the previous 50 years kept by the Royal Botanic Garden in Edinburgh. The low point between was marked by three particularly dry years in succession, from 1971 to 1973. It is possible that the highs of 2008 and 2011 are similarly aberrant. If not, the particularly unpleasant underfoot conditions we have been experiencing in the field recently may be with us for quite some time.

Between 1966 and 2007, there was a close association between high rainfall totals and extreme rainfall occurrences. The number of days with significant rainfall generally changed little, at around 180 to 190 days per year. However, the two recent years with very high rainfall, 2008 and 2011, were also years of high rainfall frequency with 220 days of significant fall. Again it is too early to say whether this change is likely to be sustained.

PEANUTS ALL WELCOME

Elizabeth Farquharson

A wire basket filled with peanuts hangs on the wall just outside the kitchen window, hanging at a height of about six feet from the ground.

Towards the end of May, there was a spell of stormy weather with gale force winds reaching close to 70 mph. On 2nd May I watched a mouse slowly climb the wall to reach the nuts.. It took over ten minutes to cover the distance but after a good feed

the descent to ground level was rapid.. It was seen on several further occasions during the next few weeks when the ascent was very fast, presumably because there was no gale force wind dragging it from the wall.

About the same time, a Grey Squirrel became interested in the nuts. The approach was over a sloping roof just above the nuts with an overhang of eight inches, and so a degree of acrobatic expertise was required to reach them. During the summer, there were spells when the small birds vanished from the garden for a week or two, but as the level of nuts continued to fall, squirrel and mouse were probably still enjoying them.

BEE ORCHIDS

Jackie Muscott



Quite a few people must know by now that the Bee Orchid *Ophrys apifera* has appeared at two sites in East Lothian. . This is quite a jump for the plant which according to the 2000 Atlas was not found further north than Cumberland in the west and the south of Northumberland in the east. It has been found also in Ayrshire, and the recent third edition of Stace's *New Flora of the British Isles* has added Roxburgh to the list. Like many butterflies, therefore, the plant appears to be moving north.

The Bee Orchid's preferred habitat is on dry or disturbed calcareous soils, including roadside verges, and this is where it has been found in the Lothians – along the A1 near limestone outcrops and on debris (which is quite calcareous) at Blindwells (which unfortunately is due for redevelopment).

The Bee Orchid like other members of the *Ophrys* family was originally fertilised by a species of wasp whose emergent males would try to mate with it, since it looked and smelt like a female (and the wasp had never seen a real one). This is a dodgy process: the plant has

to come into flower just as the male wasps emerge and before the females put in an appearance and the males realise their mistake. However the Bee Orchid seems to have lost its wasp and is usually self-fertilised: the pollen masses dangle on filaments in front of the stigma and are nudged or blown on to it.

SNIPPETS FROM JACKIE MUSCOTT

BRAMBLINGS

There were Bramblings around Marchmont and feeding on my peanuts from December 2010 to March 2011. They may have been present even earlier, but at first I mistook them for Chaffinches. They came into summer plumage towards the end of March, just before they left.

A GOOD SPRING FOR INSECTS

I saw my first Orange Tip butterfly quite early this year, in my cousin's garden near Harrogate on April 7. On 25th April in Blackford Glen I was struck by the number of Orange Tips and Small Tortoiseshells (both in double figures). It was St Mark's Day when the St Mark's flies are supposed to emerge, and they were present in large numbers too – most unusual in Scotland. There were large numbers of Orange Tips at Yellowcraig on 30th April, at Blackford again on 1st May, at Craiglockhart Dell on 3rd May, and several females laying eggs on Cuckoo Flower *Cardamine pratense* near Dunsapie Loch on 4th May (the butterfly's scientific name is *Anthocharis cardamines*). The highest number I recorded (20+) was on 7th May, as I was en route to Lochcote Reservoir. There were also lots of Green-veined Whites, mainly in the marshy areas below the path, where there is plenty of Cuckoo Flower.

I was startled to see two Orange Tips on my back green (where butterflies of any kind are scarce) on 9th May, and there was a decent number near Hailes Castle on 10th May. But the weather was deteriorating, and my last sighting was near Loch Wood on May 14 – very suitable habitat - when just two were sighted, sheltering from the strong breeze.

Apart from the first and last, all the sightings were in the Lothians, and it's interesting to note that when George Thomson's *Butterflies of Scotland* was published in 1980, the Orange Tip was only just beginning to establish itself in the Lothians after an absence of nearly 100 years. It's done pretty well since.

Incidentally, at most of the sites where Orange Tips were recorded, there were also large numbers of St Mark's Flies, much earlier than usual.

THE HARRY POTTER BLUE TITS

On my back green one day last summer, I was startled to see a Blue Tit fly straight at the wall of the next door flats.....and disappear (just like Harry Potter at the railway station). I couldn't quite believe my eyes..... and then another one did it. They were obviously nesting there, presumably in a small hole in the stonework. During the bad weather, I watched them commuting between my bird feeder and the wall, so I hope I helped the family to survive.

NIGHTJARS AND GLOW-WORMS

I avoided going to see Nightjars during the Nats trips to Galloway, having heard horrendous stories about the midges. However, when I visited a bird-loving friend in Norfolk last year, she insisted on taking me to an area where Nightjars were 'guaranteed' to appear. Unfortunately the birds there were just as uncooperative as the ones in Galloway: although we heard them, we never saw them, despite two attempts. My friend was very put out, but we did see Woodcock roding and brilliant specks of light from Glow-worms along the track. (And best of all there were no midges!)

The European Glow-worm *Lampyris noctiluca* is a beetle in the insect family Lampyridae, meaning shining ones. The females display to attract a male in June, July, and August. They retire into the ground during the day. They prefer open grass or hedges to woodland and are rarely found on agricultural land.

SWIFTS

I first sighted the Marchmont Swifts on May 11. A couple of years ago, the numbers seemed to be at an all time low, but have built up again. (It's very difficult to count them as they whizz about above and behind the flats.) I last saw them on 9th August after a couple of days of rain and before yet more rain – they must have decided enough was enough!

GREAT LETTUCE

I had not visited Philpstoun Bing, for some years, when a casual visit revealed a tall Sow Thistle-like plant near the entry. It was late in the year, and so it was not until this year that I was able to confirm the new plant was Great Lettuce *Lactuca virosa*. Given the number of plants there, it must have been around for some time. The bing is also the only site of Deadly Nightshade *Atropa belladonna* in West Lothian. It was first recorded in 1934 and not again until 1982, missing out on the second edition of the *Field Club Flora* (1934) and the first *BSBI Atlas* (1962). Originally it seems to have started in a small way on the south side of the bing and was not rediscovered until it became more widespread. The bing is due for redevelopment.

PURPLE VIPER'S BUGLOSS

Two weedy patches by the Union Canal near Philpstoun, which had been left for pheasants, produced some interesting weeds this autumn. In one, there was a single plant of Purple Viper's Bugloss *Echium plantagineum* (like a large purple-flowered version of the ordinary Viper's Bugloss). In the other, several plants of Chicory *Cichorium intybus*. In both, there were many plants of Field Woundwort *Stachys arvensis* an old cornfield weed, now very rare.

COMMON BLUE BUTTERFLIES

The Common Blue is another butterfly which seems to have done well this year. On 13th July at Aberlady, I counted more than 60, the most I have ever seen in one area. There were numerous other butterflies around too: 30+ Small Heaths, 20+ Meadow Browns, plus Ringlets, Small Tortoiseshells, Dark Green Fritillaries, a Red Admiral and some Whites (they never sit still long enough for identification), not to mention Six-spot Burnet Moths and Cinnabar caterpillars.

EXCURSIONS 2011

DATE		VENUE	LEADER
January	15 Sat	Lyn Blades	Dalmeny
February	19 Sat	Neville Crowther	Smeaton and Tyne
March	19 Sat	Jean Murray	Glenkinnon
April	16 Sat	J McNaughton	Dumbreck Marsh
	30 Sat	Malcolm Lavery	Yellowcraig
May	7 Sat	Jackie Muscott	Torphichen
	11 Wed	HeatherMcHaffie	Water of Leith
	14 Sat	Wilma Harper	Lochwood Oaks, Moffat
	18 Wed	Kathy Buckner	Ratho
	21 Sat	Eunice Smith	Heriot-Watt Riccarton
	25 Wed	D Kyles	River Almond
	28 Sat	Neville Crowther	Lindisfarne/Holy Island
June	1 Wed	Hann Levene	New Hailes
	4 Sat	J McNaughton	Loch Ardingning
	8 Wed	Mary Clarkson	Braid Burn
	11 Sat	Committee	NorthThird Res
	15 Wed	Geoffey Harper	Phenology, RBGE
	18 Sat	M Braithwaite	MuckleThairn
	22 Wed	D Adamson	Corstorphine Hill
	25 Sat	Molly Woolgar	Earlston
	29 Wed	Lyn Blades	Dalmeny
July	13 Wed	D Adamson	Bonaly Reservoir
	16 Sat	Lyn Blades	Burnmouth / Aberlady
	23 Sat	Michael Jones	Carlops
	30 Sat	Neville Crowther	Auchtermuchty
August	6 Sat	Jackie Muscott	Badinsgill
	13 Sat	Mary Clarkson	Dere Street
	17 Wed	Natalie Todman	Linlithgow
	20 Sat	Bill Clunie	Belhaven Bay
	27 Sat	Neville Crowther	Paxton House
September	3 Sat	Committee	Blair Adam, Kelty
	10 Sat	D Adamson	Portmore
	17 Sat	M Richardson	Calder Wood
	24 Sat	Wilma Harper	Hermitage, D'keld
October	8 Sat	Eunice Smith	Mortonhall Arboretum
	29 Sat	J McNaughton	Vane Farm
November	19 Sat	V Krivtsov	Musselburgh
December	3 Sat	Sue Crowther	Yellowcraig
	28 Wed	Janet Watson	Ratho and Xmas lunch



EXCURSIONS 2011



DALMENY ESTATE

15 January

Lyn Blades

In spite of the forecast of gales and rain, 13 Nats arrived at Cramond Brig Toll. It was raining but mild.

Just as we were considering a shorter, more sheltered walk along the Almond, a passing local warned us that the path there was a sheet of ice. So we proceeded into the estate and made our way down as far as the shore, followed the path towards the house and found a lunch spot with some shelter from the rain.

On the way David, who knew where to look, showed us Orange Ladybirds on the north side of the trunk of a Sycamore. They had been hibernating until we disturbed them. These creatures are believed by some to be able to predict the forthcoming winter weather. When they prepare to hibernate, they choose one of two ways. If they bury themselves in leaf litter on the ground, the winter will be cold. If they shelter in crevices on tree trunks, it will be mild. Were our ladybirds wrong last autumn?

Molly has supplied the following list of birds seen:

<i>In the fields</i>	Carrion Crow, Rook, Pheasant, Chaffinch, Pied Wagtail
<i>In the woods</i>	Mistle Thrush, Long-tailed Tit, Treecreeper, Bullfinch, Coal Tit, Robin, Blackbird
<i>On the feeders</i>	Great Tit, Blue Tit, Great Spotted Woodpecker, Goldfinch
<i>On the shore</i>	Dunlin, Knot, Redshank, Oystercatcher, Bar-tailed Godwit, Curlew
<i>On the water</i>	Wigeon, Shelduck, Eider

After lunch we took a different route back up to the main road. We did get rather wet and muddy, but it was good to be out in the fresh air after weeks of inactivity.

Lyn Blades

SMEATON AND THE TYNE

19 February

Neville Crowther

On a miserable, cold and rainy morning, ten of us met at Smeaton. We deliberated for some time as to whether or not we should spend the day in the tea shop at the garden centre. Wise heads prevailed, however, and our walk

began with a circuit of the mature, largely exotic woodland, around Smeaton Lake. The relative shelter gave us time to deliberate over the identity of the towering non-native trees, which in many cases appeared to be 2-300 years old. Mary Clarkson had cleverly brought an identification list from a previous visit.

The conifers were most impressive, although some had lost limbs in the winter snows. Wellingtonias *Sequoiadendron giganteum* were probably the tallest: a couple of Coast Redwoods *Sequoia sempervirens* were much smaller and younger than their Northern Californian forebears; several large Cedar of Lebanon *Cedrus libani* trees displayed the characteristic layered, flat branching: Deodar Cedars *Cedrus deodara* had been shedding immature cones by the hundred; Grand Fir *Abies grandis* and Japanese Red Cedar *Cryptomeria japonica* were also unusual for not belonging to the many foreign softwoods so familiar in our commercial forests.

The understorey plants included Tutsan *Hypericum androsaemum* with its winter displays of large black berries and impenetrable thickets of Butchers' Broom *Ruscus aculeatus* with sharply pointed, bottle-green cladodes. The first flowering spikes of White Butterbur *Petasites albus* were poking through and large tussocks of *Carex pendula* still had the drooping inflorescences of last summer. Swathes of Snowdrops *Galanthus nivalis* formed continuous drifts at the western end of the wood.

Although this had been a most interesting start, we left the shelter and set off into the wind and drizzle to East Linton and the footpath along the Tyne. Good views of two Dippers on the lade to Preston Mill gave us hope for

more interest along the river. We crouched under the drying kiln for shelter to eat our sandwiches, rather disappointed that the NTS did not open the buildings in winter time.

We strode out briskly to get warm along the river bank towards Knowes. The first ‘pussy willows’ gave promise, and soon we found a flock of Whooper (27) and Mute (2) swans in a field of winter cereals.

Three immature Cormorants were flushed from the riverbank and preceded us down the weir and through the ford at Knowes. After examining the dilapidated undershot water wheel at the Knowes mill, the lure of the soup and coffee at Smeaton became irresistible, and we barely stopped during our charge uphill and into the eastern drive to the Garden Centre and its tearoom.

Neville Crowther



DUMBRECK MARSH AND BAR HILL FORT

16 April

Joan McNaughton

Dumbreck Marsh, near the village of Twechar, was designated a Local Nature Reserve in 1993 and is one of a series of wetlands that lie in the flood plain of the River Kelvin. The reserve is reclaimed from an area of major industrial dereliction. Once covered with coke and coal waste and crossed with mineral railway lines, it is now a vibrant wildlife reserve of open countryside, with marsh, ponds and large areas of grassland.

As we set out, there was a cold wind, but the spring sunshine helped alleviate the chill slightly. The walk started along the bank of the Kelvin, on paths built on the track of the old railway lines. We crossed a scrubby, rough grass area, passing one of the flooded pits, and arrived at Dumbreck Marsh and Loch where we saw a good variety of birds. In addition to ‘all the usual suspects’, the passerines included good numbers of all three hirundines, three species of tit, four warblers (Chiffchaff, Sedge Warbler, Blackcap, and an extraordinary count of 45 singing Willow Warblers), a Great Spotted Woodpecker, four finches (Chaffinch, Goldfinch, Lesser Redpoll and Greenfinch) and a Reed Bunting. There were three waders (Curlew, Redshank and Snipe), Mute Swan, two geese

(Canada and Pink-footed) and two ducks (Mallard and Tufted). The only raptor was Buzzard, but it was well represented with a count of five. Neville’s Table below provides an assessment of breeding status, along with the relevant evidence.

The circular route took us back to our cars, and we continued up the hill to visit the Bar Hill Roman Fort. We spent some time exploring the

Blackcap



excavations. Traces are visible of the west, north and east ramparts and ditches of

the wall. The fort lies some 200ft farther south, and the baths are particularly well excavated. Starting with the changing room (*apodyterium*) and latrines, one moved on to the cold room (*frigidarium*), followed by the range of steam rooms, a kind of Turkish bath: the warm room (*tepidarium*), hot room (*caldarium*), and lastly the hot, dry room (*laconicum*). This, the hottest, was closest to the boiler room (*praefurnium*) at the east end. The baths were fed via wooden pipes which led from a large tank nearby.

Joan McNaughton

Birds seen and their breeding status

Species	No	Breeding	Evidence
Grey Heron	3	Possible	Habitat
Mute Swan	4	Probable	Pairs in habitat
Pink-f Goose	12	Migrant	
Canada G	2	Possible	Habitat, pair
Mallard	7	Probable	Habitat, pair
Tufted Duck	2	Probable	Habitat, pair
Buzzard	5	Probable	Display
Pheasant	2	Probable	Holding territory
Redshank	1	Possible	Habitat
Snipe	2	Possible	Habitat
Curlew	1	Possible	Habitat, display
B-h Gull	1	Probably breeding elsewhere	
GS W’pecker	1	Possible	Habitat
Skylark	2	Probable	Holding territory
House Martin	10	Probably breeding elsewhere	
Swallow	12	Probably breeding elsewhere	
Sand Martin	20	Probably breeding elsewhere	
Blackbird	1	Possible	Habitat

Species	No	Breeding	Evidence
Robin	3	Probable	Holding territory
Gréat Tit	5	Probable	Holding territory
Blue Tit	13	Probable	Holding territory
Coal Tit	2	Possible	Habitat, pair
Willow W	45	Probable	Holding territory
Chiffchaff	3	Probable	Holding territory
Blackcap	1	Possible	Habitat, song
Sedge W	1	Possible	Habitat, song
Carrion Crow	7	Probable	Habitat, territory
Magpie	2	Probable	Habitat, territory
Chaffinch	12	Probable	Holding territory
Goldfinch	1	Possible	Habitat, song
Lesser R'poll	3	Possible	Habitat, song
Greenfinch	2	Probable	Holding territory
Reed B'ting	1	Possible	Habitat, song

Neville Crowther

YELLOWCRAIG 30 April Malcolm Lavery

The haar, which had plagued the East of Scotland for weeks, was absent on the day of our visit to Yellowcraig (also known as Yellowcraigs), giving clear skies and pleasant spring weather. Seventeen Nats came out to enjoy the sun and find out what was to be seen after yet another hard winter.

We didn't have to walk far to find our first points of interest. Along the western edge of the car-park, Hemlock *Conium maculatum* was sprouting profusely, while a healthy clump of yellow umbellifer Alexanders *Smyrniium olusatrum* could be found at the beach-side exit. Yellow Figwort *Scrophularia vernalis* was plentiful along the northern border of the car- park, and Spring Beauty *Claytonia perfoliata* in flower was widespread. Other typical spring flowers included Ground Ivy *Glechoma hederacea*, Red Campion *Silene dioica* and Garlic Mustard *Alliaria petiolata*.

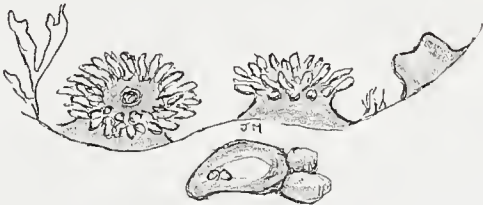
Birds were evident too – at least two separate Common Whitethroats were heard scratching out their brief song among Gorse bushes not far from our cars, and the Blackcap's more melodious notes were clearly heard from taller trees in the surrounding woodland. We had a good view of one of the Whitethroats, which perched at the top of a sprig of Gorse, but the Blackcaps remained

hidden among foliage. Chiffchaffs added to the count with their persistent call, and at one point Joanie identified a Garden Warbler to make up a quartet of the warbler family.

Insects were showing themselves in the sunshine: St Mark's Flies *Bibio marci* were abundant everywhere, and male Orange Tip butterflies *Anthocharis cardamines* and a single Small Copper *Lycaena phlaeas* made an occasional appearance. A Common Carder bee *Bombus pascuorum* was spotted foraging among the spring flowers.

We headed down to the beach, passing a large patch of Common Comfrey *Symphytum ssp* that caused some interest, as its flower colouration appeared to show some characteristics of both Common and Russian varieties. Probably an escaped cultivar.

Beadlet
Anemone



We had come armed with nets and trays to do a little 'pond dipping' in rock pools, and so proceeded down to the waters edge to see what we could find. There was little of great interest there but we did find a couple of Beadlet Anemones *Actiniae aquina* and a few shrimps, and attempted to identify some common seaweed species: *Enteromorpha intestinalis* or 'Green Guts' was common among these as well as Spiralwrack *Fucus spiralis* and Bladderwrack *Fucus vesiculosus*.

Out on the water, Eiders were among the most common birds, and through the telescope Gannets could be seen thronging around the Bass Rock. Cormorants flew low over the waves occasionally, and out on Fidra, Kittiewakes and Fulmars were nesting.

We found a sheltered spot for lunch, as a fresh easterly breeze was sweeping up the Forth. Nearby we found a Six-Spot Burnet moth *Zygaena filipendulae* , sunning itself on a leaf.

In the afternoon the party split up, and some of us headed for the prominent hillock over by the woods, as some interesting plants had been spotted there on the recce. On the way, we passed a specimen of Sea Mayweed *Cerastium diffusum* or Sea Mayweed *Tripleurospermum maritimum*, and saw a Small Copper butterfly, while on the hill itself there was Japanese Rose *Rosa rugosa*, Wild Privet *Ligustrum vulgare*, Wall Speedwell *Veronica arvensis* and Spring Vetch *Vicia lathyroides*. Moving along towards the North Berwick golf-course, Rue

Leaved Saxifrage *Saxifraga tridactylites* was discovered plus the attractive fern Black Spleenwort *Asplenium adiantum-nigrum*. Cuckoo Flower *Cardamine pratensis* and Field Horsetail *Equisetum arvense* were abundant on the boggy area just before the start of the golfcourse, and in a tiny puddle, looking sadly doomed by the lack of recent rainfall, was a scattered group of tadpoles.

We made our way back to the cars, and the day finished with a trip to an ice-cream van which had appeared in the now crowded car-park.



Rue Leaved Saxifrage

It had been a promising start to the summer excursion programme, with a lovely day and a long species list to give cause for satisfaction.

Malcolm Lavery

TORPHICHEN-LOHCOTE RESERVOIR

7 May

Jackie Muscott

I was supposed to lead this excursion but had been ill and have to thank David Adamson for doing the recce and taking the lead on the day. An elite group of eight members had a most enjoyable outing, for this was one of the last days of the warm spell which had brought out all the spring flowers and insects in a rush.

We started off from the Torphichen Presbytery and took the road north out of the village, picking up a nice selection of plants on the verges, including a little Star of Bethlehem *Ornithogalum umbellatum*, Bush Vetch *Vicia sepium* and a patch of Water Avens *Geum rivale* near a stream. St Marks Flies *Bibio marci* were conspicuous, flying above the vegetation, dragging their legs behind them: they appeared early this year, and in some quantity.

Turning right towards Craigend, we were soon walking along a pleasant track, with woods on one side and marshy fields below on the other. Woodland flowers included Primroses *Primula vulgaris*, Bluebells *Hyacinthoides non-scripta*, Violets *Viola riviniana*, Greater Stitchwort *Stellaria holostea* and, in damper places, Bugle *Ajuga reptans*, Yellow Pimpernel *Lysimachia nemoralis* and Cuckoo Flower *Cardamine pratensis*. More Cuckoo Flower and Marsh Marigolds *Caltha palustris* were clearly visible in the marshes

below. Quantities of butterflies, mainly Orange Tips *Anthocharis cardamines* and Green-veined Whites *Pieris napi* were flying by the wood edge and above the marshes. As the species name suggests, Orange tip larvae feed mainly on Cuckoo Flower, as do those of Green-veined Whites, though not so exclusively.

Chaffinches and Willow Warblers were both singing, and so it was easy to compare their calls. A Green Woodpecker was heard too, and eventually a Chiffchaff (I do like birds that call their own names), and we had the pleasure of seeing a Lilac *Syringa vulgaris* in full bloom, with a Blackcap singing atop it..

Eventually we reached Lochcote Reservoir, which was the end of the walk for me, while others continued to the top of Bowden Hill where there is an Iron-Age fort. Here it was more acid with a fair amount of Blaeberry *Vaccinium myrtillus* which led David to search for Blaeberry Bumblebees *Bombus monticola* and Roger Holme for Green Hairstreak butterflies *Callophrys rubi*. Roger was the lucky one, as they found a single Green Hairstreak almost straight away – the find of the day. (Incidentally we saw a total of eight butterfly species during the walk).

Mary Clarkson and I had lunch on the grassy slopes below the reservoir and investigated the nearby marsh. There was a good deal of Lady's Mantle both *Alchemilla glabra* and *A. xanthochlora* on the grassy slopes, and there were large numbers of fruiting spikes of Field Horsetail *Equisetum arvense* on the hard edge of the reservoir. These spikes are brown, lacking chlorophyll, and rely for nutrition on the green sterile spikes which usually appear later. The rest of the party arrived back at this point and pointed out large patches of Goldilocks Buttercup *Ranunculus auricomus* on the far side of the reservoir – the most interesting plant of the day.

As for fungi, Mary Clarkson had to content herself with rusts, which abounded – on Roses, Brambles, Creeping Thistle, Ground Elder, Bluebells, Violets, Lady's Mantles, Marsh Marigold and Nettle. Indeed Nettle Rust *Puccinia punctata* has been particularly prevalent this year, being seen on most outings. It has two hosts and infects various sedges later in the year.

Back at the Presbytery, we had a final botanical goodie in the form of Brittle Bladder Fern *Cystopteris fragilis*, a dainty little fern which appreciates old walls with lime-rich mortar. We also had a look round the building, which contained an interesting historical display about the Knights of St John, a branch of which once lived there. On one of the walls, remains of paintwork were just visible, reminding us that, before the reformation, churches were highly decorated, with brightly painted walls and colourful statues.

Some of the party ended the day with a visit to George McDougal who lives nearby. He is now in his 97th year and until quite recently was a regular leader of Nats outings. We enjoyed tea and biscuits and a tour of the garden, which contains an interesting mix of cultivated and wild plants, David Adamson being responsible for many of the latter. The welcome refreshments and the chat with George made a delightful end to a pleasant day.

Jackie Muscott

Footnote: I went back later in the year to show a friend the Brittle Bladder Fern, only to find the wall had been sprayed with herbicide. We think a little of the fern may have survived in a crevice, however.

Celandines

There are two ‘celandines’ in the British flora: the Greater Celandine *Chelidonium majus* and the Lesser Celandine, now *Ficaria verna*, which has been through several name changes and must once have been known as *Chelidonium minus*.

The true Celandine is *Chelidonium majus*, a member of the poppy family, also known as Swallow-wort, chelidon being Greek for Swallow. The name first appears in a medical treatise written by Dioscorides in AD 64, in which some 600 kinds of plant were described. According to Dioscorides, the plant got its name either because it came out when the Swallows arrived, or because of a story about Swallows using the orange latex that exudes from the stem to restore the sight of their nestlings. For this reason, the juice was recommended as a cure for eye conditions, and Gerard in his sixteenth century herbal was still endorsing its use to sharpen the sight. In fact, the latex is slightly acrid and was more recently used (without much success) to cure warts. The plant is non-native, having been introduced for medical reasons, and is usually found near old buildings.

By contrast, *Ficaria verna* (*Ficaria* means little fig, and *verna* refers to the spring), is a native plant, a member of the buttercup family. It also is yellow and leaks juice when cut and was presumably the poor man’s Swallow-wort. However it was more often used as a cure for piles or for scrophula. The root tubers (which make it so difficult to eradicate from a garden) look like the nodules or ‘figs’ typical of piles, and also like the swollen lymph nodes in the neck caused by scrophula. Alternative names of the plant are Figwort and Pilewort. The tubers are also reminiscent of a cow’s udder, while the petals are the colour of butter, and so a root with four tubers hung over the byre was reckoned to encourage rich milk.

Figwort *Scrophularia nodosa*, which has nodules on its roots, was also used to treat piles and scrophula and was formerly known as the Greater Figwort, *Ficaria verna* being the Lesser Figwort. These medical practices were

based on the Doctrine of Signatures, popular in the fifteenth and sixteenth centuries. This doctrine held that if a plant resembled an organ or disease it must be able to cure that organ or disease.

Another interesting consequence arising from this doctrine is that there are two Lungworts: one a lichen *Lobaria pulmonaria*, which bears a fair resemblance to a lung, the other a plant *Pulmonaria officinalis* whose spotted leaves are also reminiscent of lungs. Both would be used to address lung problems. Incidentally *Lobaria* refers to lobes and *pulmonaria* to lungs while *officinalis* indicates that the plant was a medicinal herb available from apothecaries; wort is just an old name for a herb.

Jackie Muscott

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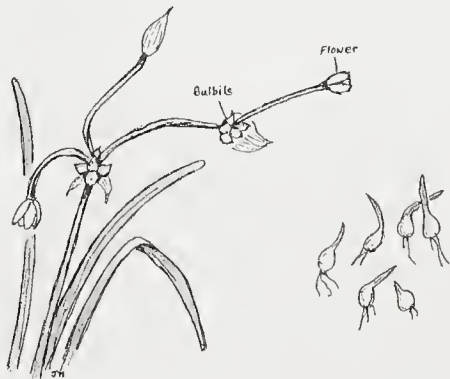
WATER OF LEITH

11 May

Heather McHaffie

A small group met at Canonmills bridge after a day of rather doubtful weather. There were notices about flood-prevention work starting on the Water of Leith, but the paths were not yet closed. In a sense this was an historic walk, as it was the last time sections of the riverbank would be seen as they had been for many years. We descended some steps to the riverside and saw many examples of the introduced species and garden escapes that establish on riverbanks. The Few-Flowered Leek *Allium paradoxum*, with perhaps only one flower and a cluster of shining bulbils, was growing alongside the native Ransoms *Allium ursinum* which has many flowers in an umbel.

Another alien species is the large-leaved *Geum macrophyllum*, which looks like a very robust Wood Avens *Geum urbanum*, but the basal leaves have very large terminal lobes compared with the native species.



Few-Flowered
Leek (bulbils
sprouting in
February)

Both were growing together at three points, and we were able to see the differences. We took time to compare and identify common species and there were plenty to practise on.

The flood-prevention work involves building a broad, high, reinforced wall where the previous wall was low enough to permit flood water to threaten houses. Where we saw vegetated banks, a temporary road has since been built up with hardcore directly onto the river bed to give access to the heavy machinery and pile drivers. The river has been deepened beside the access roads, and the profile of the river bed has been radically changed. We enjoyed wandering along a walkway from the road bridge near the colonies up to Stockbridge. This had different species on the riverbank and growing in the wall. I was able to take advantage of our finding some Tuberous Comfrey *Symphytum tuberosum* and collected a DNA sample and voucher specimen for a UK-wide project looking at the DNA of the British flora. Sadly, this whole section of the walkway is now buried under another of the temporary access roads. Once the works have been completed it will be interesting to make repeat visits every few years to see how the banks recover and which species will colonise again. It is fortunate that there are many native species on higher parts of the bank upstream and it is to be hoped that a good proportion of these will establish before non-native invasive species.

Heather.McHaffie

Natives and Aliens

Of the five plant species mentioned in Heather's article, two are definitely aliens (as contrasted with native species) and a third, Tuberous Comfrey, probably is but has been around for some time. Large-leaved Avens by contrast is a recent introduction, and so we don't know yet how it's going to behave – whether it will turn out to be invasive, or whether it will hybridise with native relatives. Few-flowered Leek is also relatively new to the British flora but has quickly shown itself to be highly invasive. It prefers a damp, shady environment and over the last 30 years has colonised large areas of Blackford Glen, Roslin Glen, the Water of Leith etc. crowding out native species; it can even out-compete our native Ramsons which appears superficially more robust.

As Heather points out, Few-flowered Leek produces few flowers but many bulbils, a very efficient form of vegetative reproduction. Bulbils provide plenty of nourishment for the young plant and in one year can produce a small forest of new plants surrounding their originator (not so much a parent as an identical twin). In February, when much vegetation has died back, you can often see the small whitish bulbils lying like confetti on bare ground and getting ready to put out roots and shoots. The leaves are up early before those of many woodland plants, which soon find themselves crowded and shaded out. Incidentally Snowdrops *Galanthus nivalis* seem able

to survive amid a sea of Few-flowered Leek, perhaps because they get going even earlier. (They are introduced too.)

One thing I'm prepared to put money on is that Few-flowered Leek will be back once the flood protection works are over; there are lots of bulbils on other parts of the path waiting to be trampled along on muddy boots. Both the Avens will probably return, but I have my doubts about other native woodland plants unless there are surviving seeds. Typically they need an existing population nearby.

Jackie Muscott

LOCHWOOD OAKS

14 May

Wilma Harper

The legacy from the late Miss Margaret Mowat to help fund Society excursions allows us to go farther, set up more complex excursions and provides an opportunity to share transport. With that in mind, I was able to plan an excursion to Lochwood Oaks near Moffat, one of the most interesting small woodlands in Scotland. It sits on a slight ridge next to the ruined Lochwood Tower, ancient home of the Johnston clan. The Oaks have been dated by dendrochronology back to 1571. They are listed in the SSSI notification as Sessile Oak *Quercus petraea*, but examination under the hand lens by Bob Gray of the Glasgow Nats suggested the features of Pedunculate Oak *Quercus robur*. The trees have been pollarded (cut at head height) and are covered in mosses and polypody ferns.



Greater Celandine

We parked the bus by a forest road end, surrounded by the debris of a conifer clear-fell site, and some members may have wondered what I'd brought them to. However, it all became clear as we walked up the minor road into the oakwood: the buds on the trees were open, revealing their fresh new leaves, and the May sun

shone through a carpet of native Bluebells *Hyacinthoides non-scripta*. At just under 10ha, this is quite a small site, and the group dispersed to pursue their individual

interests. Joanie McNaughton was on the look out for birds and recorded the following:

From road	Willow Warblers singing everywhere Wrens singing at points through the oakwood Chaffinch and Blue Tit nests, with parents to-ing and fro-ing with food Blackcap singing Nuthatch calling at several places Garden Warbler singing
Approach.to Castle	Green Woodpecker yaffling on the woodland edge Great Spotted Woodpecker drumming Nuthatch calling Rookery
At Castle	About half a dozen Goldfinches in an adjacent field Swallows
Path through wood	Great Tit and Blue Tit Buzzard circling overhead Great Tit and Blue Tit Buzzard circling overhead

Jackie Muscott and others were finding plants not often seen in the Lothians but thriving in this long-established woodland with its more westerly character. Jackie pointed out two Stitchworts, the Greater *Stellaria holostea* and the Wood *S. nemorum* and the leaves of Climbing Corydalis *Ceratocapnos claviculata*. Also of interest near the castle was Greater Celandine *Chelidonium majus*. It is an introduced plant, with a medicinal history dating back to Pliny.

On one of the roadside trees we found Tree Lungwort *Lobaria pulmonaria*. This large and distinctive lichen is said to resemble the lungs

and, unusually, is a composite organism comprising three different species: in addition to the fungus and alga, it contains a cyanobacterium *Nostoc* sp. Cyanobacteria were formerly known as blue-green algae, but have recently been shown to be types of bacteria, unrelated to algae.

Trees of this antiquity are also good for fungi, and we saw Chicken of the Woods *Laetiporus sulphureus* and King Alfred's Cakes *Daldinia concentrica* (also known as Cramp Balls).

Back on the bus, our next stop was Kinnel Water, a mile or so away: a good site for lunch, with a nice bank and a river. However, it proved of more interest than we expected. On the way there we saw a Kestrel hovering and another raptor on a dead tree, possibly a female Hen Harrier. We later saw a male Hen Harrier flying over the trees. Sitting on the bank we had a great view of Sand Martins, possibly nesting in the bank nearby.

There was a good range of habitats in this small area: the river and its wooded bank, shingle beds, sand banks and the old stream bed, which is becoming a base-rich bog, with Tussock Sedge *Carex paniculata*. Jackie recorded more than 100 plants, mainly marsh and water species, and so our stay was rather protracted. Some of the more unusual finds were Oak Fern *Gymnocarpium dryopteris*, Marsh Valerian *Valeriana dioica* and Blinks *Montia fontana*. On the drier shingle banks were Lesser Bird's Foot Trefoil *Lotus corniculatus* and Sheep's Sorrel *Rumex acetosella*. Sorrels are the food plant of the Small Copper caterpillar, and one adult was seen. We also had two Orange Tips, whose caterpillars feed on Cuckoo Flower *Cardamine pratensis*, (also present). Dryad's Saddle *Polyporus squamosus* was found on an old tree stump by the bank, along with the black bootlaces of *Armillaria*, the Honey Fungus.

The final stop of the day was at the Dyke's Farm Reserve on the outskirts of Moffat. This impressed the group as a particularly attractive place, with ponds, hides, nest-boxes and woodland. There was obviously great local support for the site, lots of information provided and a bit of a garden dedicated to supporters. The ponds were rich in sedges: five species had been recorded in flower, including Slender Tufted Sedge *Carex acuta*, rare in Scotland.

Birdlife included Willow and Sedge Warblers aplenty and a pair of Canada Geese (we later found an egg showing signs of predation on the path). We stood and watched Great Tits going in and out of a nest-box, and some of the group were treated to a view of Nuthatches mating.

So, three very interesting and very different sites in one day. As we headed back to Edinburgh on the bus, there was general agreement that there had been something for everyone.

Wilma Harper

With thanks to Jackie Muscott for the plant records and Joanie McNaughton for the bird list.

TORMAIN WOOD AT RATHO
18 May
Kathleen Buckner

Nine hardy souls braved the strong winds for an evening walk through Tormain Wood, situated to the south-west of Ratho Village. Tormain Wood is a well-known landmark on Edinburgh's westerly horizon and was originally planted as a shelter belt for the surrounding farmland. Many of the trees, predominantly Beech and, towards the summit, Scots Pine, are nearing maturity and in the past ten years have been under-planted with young trees. Livestock, which used to roam freely beneath the

trees, are now excluded by post-and-wire fencing, and, slowly, a wider range of plant species is taking hold beneath the canopy. A large Badger sett was observed, but the main reason for our visit was to see the cup and ring marked stones. As the stones are best viewed when the sun is in the west, this was an ideal time of day to visit. The carvings are thought to be from the Neolithic period (4000-3200 BC). One of the stones has a large arrow inscribed on it and is thought to have been used as a triangulation point in about 1853.

Our walk continued down to Wilkies Road, along the old, now disused, road to Ratho and then onto the bund surrounding Craigpark Quarry. Here the ground has been fairly recently disturbed, and there was a greater abundance of wild flowers, including a significant amount of early growth of the Common Spotted Orchid *Dactylorhiza fuchsii*. Finally, we wandered through the remains of an octagonal walled garden that would have been part of the Craigpark Estate. The Garden History Society believe that its design is a rare example of the Gothic Revival style. The site is subject to a proposed development of 117 houses. The developers of the Craigpark site are proposing to incorporate elements of the walled garden into the new landscape and to restore the quarry for public amenity. It was noticeable on this excursion that birds were mostly taking shelter from the strong winds and we too were glad to return to the shelter of Ratho.

Kathleen Buckner

BIODIVERSITY WEEK

During Biodiversity Week 2010, ENHS joined with other partners in the Edinburgh Biodiversity Group to host an interactive stall in the Royal Botanic Garden. In 2011 it was decided that the Society would support the Week by leading walks to help survey the grounds of the campus at Heriot-Watt University at Riccarton and also the Almond Walkway. Each of the walks, which were also part of the ENHS Excursion Programme, was well-advertised and open to the public.

HERIOT-WATT CAMPUS

21 May

The formal gardens at Riccarton on the outskirts of Edinburgh were laid out in the mid-18th century, and the loch was constructed much later in 1850. In more recent times, the estate was in the ownership of the Gibson-Craig family. Sir William Gibson-Craig was a keen plant collector in the 19th century and was responsible for the introduction of many exotic specimen trees. In the 1960s, Riccarton became the main campus for Heriot-Watt University. The University has a Site Conservation Committee, and the campus is planned so that vehicular traffic through the estate is kept to a minimum and separated from pedestrian traffic. The estate is

protected by shelter-belts, and its woodlands, gardens and loch are sensitively managed.

In advance of our walk, we held a meeting with members of the staff. Some time after that meeting, Jim Swan, the Estates Manager, conducted three of our members around the grounds and was most helpful and generous with his time.

On the day of the outing an encouraging turnout of 24, mainly members but also including a few visitors, traversed the extensive grounds. It had been hoped that some students might have joined us on the outing but unfortunately the date coincided exactly with the end of term. We had a welcome break for lunch in the canteen to restore mental and physical energy.

Many of the magnificent specimen trees in the grounds were admired and easily identified by their labels but it was sad to see the major damage caused to the Cedar of Lebanon by earlier gales. Taking into account the extent of the grounds and the number attending, it was inevitable that we separated into smaller groups as one thing after another attracted attention. As a consequence, not everyone saw the Wollemi Pine, a recent exotic addition to the Campus. This species, previously thought to be extinct was discovered in 1994 in New South Wales. Because of its rarity, the site of its discovery is kept secret. A propagation programme was set up and, when cultivars became available, one was planted at Riccarton in recognition of Sir William Craig's support of earlier plant-finding expeditions.

Unfortunately, the weather was not as good as on the preliminary visit, and, with the exception of a Green-veined White (*Pieris napi*), butterflies were in short supply. However a Green Longhorn Moth *Adela reamurella* with stunning delicate "gold" wings did not seem to mind the conditions.



Green Longhorn Moth

A Red-Tailed Bumblebee *Bombus lapidarius* was found with a nest, and the five other common species of bumblebee: White-Tailed *B.lucorum*, Buff-Tailed *B.terrestris*, Early *B. pratorum*, Carder *B.pascuorum*, and Garden *B.hortorum*. A cuckoo bumblebee and an Early Mining Bee *Andrena haemorrhoa* added to the interest. It was encouraging to note three species of ladybird (Cream-spot, Larch and Ten-spot) and also the Hawthorn Shieldbug *Acanthosoma haemorrhoidale*.

We enjoyed watching Greylag Goose, Tufted Duck, Moorhen, Mallard, Mute Swan and Heron in or around the large pond and saw many other small birds

throughout the site. A male Blackcap was heard singing at the graveyard, and many Rooks were in the rookery.

The list of plants and grasses recorded is extensive and includes the Common Spotted Orchid *Dactylorhiza fuchsii* and Northern Marsh Orchid *D. purpurella*. As we came to the end of the walk, one of our number spotted a tree-stump bearing a fungus which was recognised as *Pluteus cervinus*. A full list of records compiled from botanical and wildlife notes taken by diligent recorders is available from evnike@supanet.com.

Heriot-Watt University is indeed a true custodian of the biodiversity of this historic site.

ALMOND WALKWAY

25 May

A grant provided to upgrade the walk alongside the River Almond aims to improve public access while also conserving and promoting features of historical, wildlife and botanical significance. The plan will be implemented by the City of Edinburgh Council Countryside Ranger

Service over a 10-year period. There has been consultation with various local and other organisations, and ENHS offered to survey the area for matters of biodiversity interest.

On this evening walk, our group of 14 were accompanied by David Kyles (the Countryside Ranger) and by John Dods (a local historian). The walk started at Cramond Boathouse and extended to just beyond the Salvesen steps but was limited by darkness and threatening rain! Throughout the evening, John indicated points of local and historic interest. When we came to the ruined Fairafar Mill, he described its workings and showed marks on the rocks that indicated the milling activities. David gave a short introduction to the aims of the Almond Walkway plan, mentioning particularly the need to remove non-native invasive species such as Himalayan Balsam *Impatiens glandulifera*, Cherry Laurel *Prunus laurocerasus* and Japanese Knotweed *Fallopia japonica*. He also indicated the intention to replace the steep (and now rotting) Salvesen Steps. No decision has yet been made on how that part of the route can be made more accessible and there are substantial financial implications with proposed solutions.

Botanical and wildlife records from this area gathered earlier from ENHS members had already been incorporated into the Plan prior to its publication. On this walk, additional species noted included Bulbous Buttercup *Ranunculus bulbosus* growing in a grassy patch, and the walls of the mill were a perfect backdrop for Maidenhair Spleenwort *Asplenium trichomanes* and Brittle Bladder Fern *Cystopteris*

fragilis. Elsewhere, Wall Lettuce *Mycelis muralis* was in evidence. On the water, a Goosander shepherded at least four chicks, and a Dipper and some Swifts were also seen. Once again (?lesser mortals small insects) such as Hawthorn Shieldbug *Acanthosoma haemorrhoidale* were around.

On a dull and fairly cold May evening, the area was not at its best. In several areas overhanging trees made it difficult to appreciate what a pleasant and interesting walk this can be. The condition of the trees has been a matter of concern for some time and selective arboricultural work has already started. The new plan aims to safeguard the history and natural features of the Almond Walkway and to improve access. It will be interesting to make a return visit - on a warmer evening!

Emnice Smith

Footnote: Work on the conservation of the wall of Fairafar Mill has been started, and measures have been taken to protect the plants growing on it.

LINDISFARNE

28 May

Neville Crowther

Everyone was on time for the the bus from Waterloo Place, and so we crossed the Causeway with 15 minutes to spare before the tide cut us off for what we hoped would be a day of splendid isolation.

It was a cool and blustery day, continuing the late advent of Spring, and many plants were tardy in their growth. Even the normally rampant alien Pirri-pirri Bur *Acaena novae-zelandiae* was still in early flowering mode. It was our impression that it had increased its coverage in the dunes to the north. The slacks near the ruinous lime kilns had pink Early Marsh Orchids *Dactylorhiza incarnata*, Purple Northern Marsh Orchids *D. purpurella* and hybrids. The flowers of Quaking grass *Briza media* were just beginning to burst from their sheaths. Marsh Pennywort *Hydrocotyle vulgaris* and Brookweed *Samolus valerandi* occupied the damper areas, and a large stand of fruiting Cotton Grass turned out to be *Eriophorum angustifolium*, despite the alkaline conditions. Thanks to Jackie for keeping us straight.

Regrettably the weather was not conducive to butterfly-spotting, but as we moved northwards to younger dune systems, we were diverted by passing through many circular stands of Creeping Willow *Salix repens*, about 25cm high and 3-6m in diameter, and by infant rosettes of Grass of Parnassus *Parnassia palustris*. Between the grey and yellow dunes we found the remnants of a fishing hamlet now derelict and part buried by blowing

sand. The final dunes flanking the beach were consolidated by Marram *Ammophila arenaria*, Sea Lyme grass *Leymus arenarius* and Sand Sedge *Carex arenaria*.

Black clouds and rain squalls forced us away from the beach to seek shelter for lunch in the dunes. A few of the party decided to take the shortest route back to the village. Once there they found that Betty Smith had arrived with her daughter Mandy, and despite her limited mobility was exploring the village. The rest of us followed the perimeter of the field systems clockwise, finding day-flying Cinnabar and Garden Carpet moths, caterpillars of Drinker moths (Woolly Bears) before reaching the bird hide overlooking the loch. Swallows were hawking desperately for insects: two pairs were feeding young inside the hide. A few water fowl, Mute Swans, Tufties and Dabchicks were on the water, as was a large plastic bag, identified confidently by the leader as a farmyard goose.

In the last mile we were delighted to see sunshine again. A stop at Gertrude Jekyll's garden disappointed us: the lateness of spring was again blamed for its run-down appearance. Back in the village, crowds of newcomers revealed that the causeway was now open again. It was time for our homeward journey.

Neville Crowther

NEW HAILES

1 June
Hannah Levene, NT(S) Ranger

A band of six arrived on a cool, grey evening to meet Hannah Levene and her assistant Michelle. We spent a little time talking about the house and the estate. Built in the seventeenth century, this mansion and its designed landscape were acquired early the following century by Sir David Dalrymple, who hosted many meetings here with figures from the Scottish Enlightenment.

The designed landscape has deteriorated considerably since then, but is no doubt richer in native species now than at that time, although many exotics remain from this legacy.

An aged 'topped' Horse Chestnut engaged our attention because of its fungal saprophytes. Very large brackets of Dryads Saddle *Polyporus squamosus* were noticeable from a distance. They are usually found on Ash trees. A tufted growth of Oyster Mushrooms *Pleurotus ostreata* were reached by a short scrabble up the trunk. Low down on the shady side, Mary Clarkson found a grey and black dehydrated fungus between cracks in the bark. Cleverly, at home, she rehydrated the specimen with hot water, and it became a normal rubbery Jew's Ear fungus *Auricularia auricula-judae*.

Following a wooded stream to the north, our attention was drawn to a strange folly, now ruinous, but built partly from blue-green glassy rocks which appeared to have once been the slag from a steel furnace. Blackcaps and Chiffchaffs invisibly and frustratingly serenaded us

as we identified many common woodland flowers. Ivy entwined most trees giving a gloomy feel to the wood. We came out onto a path known as Ladies' Walk edged by hundreds of small trees with pale, rugged bark which we took to be, perhaps mistakenly, Small Elm. Crossing a large meadow back towards the mansion we found lots of the bright cerise flowers of Common Vetch *Vicia sativa* and nettles covered in black caterpillars. There was some disagreement as to which nymphalid butterfly had produced them. The writer took several home and fed them nettles for a couple of weeks. They pupated and after a few days emerged as Small Tortoiseshells.

We were told that the trees around the house were home to a pair of Tawny Owls, but we waited in vain for their calls. We did however find a Click Beetle *Athous haemarrhoidalis* which obediently performed for us, several times. Its larva, the Wireworm is a serious agricultural pest, as many of us who are gardeners will probably know.

We thanked Helen and left her in the gloaming to continue her duties into the night, running a bat survey with group of young volunteers.

Neville Crowther

LOCH ARDINNING

4 June
Joanie McNaughton

On this, our second excursion to Loch Ardinning, the weather was not quite as favourable as it was three years ago. However, it did not rain.

Marsh Cinquefoil

Loch Ardinning, an SWT reserve, is a surprisingly lovely, tranquil place, especially so close to Glasgow and to a busy main road. It was gifted to the Scottish Wildlife Trust in 1988. The surrounding landscape was formed 11,000 years ago at the end of the last Ice Age when a massive glacier carved out the landscape leaving behind hollows which collected melt-water and created the loch. As the ice





Alongside the Kelvin: Dumbreck Marsh



Searching the escarpment: Muckle Thairn



Trooping over the dunes: Lindisfarne



North Third Reservoir



Drawing in the net: Paxton



Tagging Salmon: Paxton



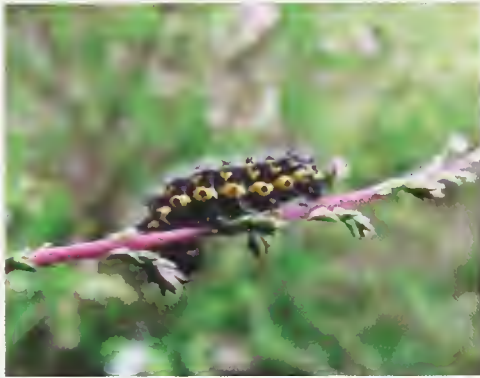
Treasure trove: Musselburgh



Nettle Weevils copulating:
L. Ardinning



Common Blue: Aberlady
Cinnabar Moth: Lindisfarne



Emperor Moth larva: Muir of Dinnet



Marmalade Fly:
Auchtermuchty



Small Skipper: Dere Street



Male Common Hawker: Glentanar



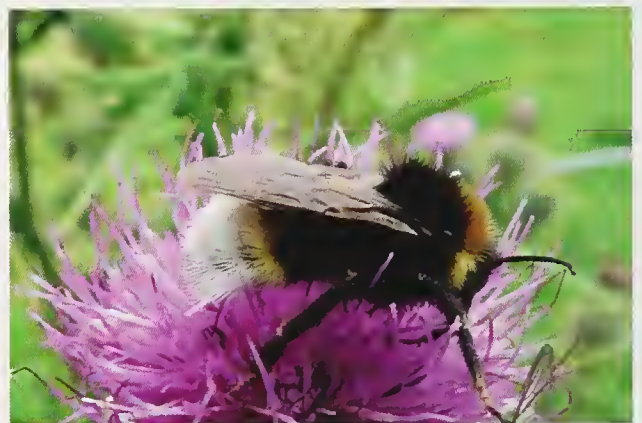
Grayling:
Meadowmill



Meadow Brown:
Blindwells



Drinker caterpillar: Lindisfarne



B. monticola: Dere Street



Antler Moth: Auchtermuchty



Green Drake + subimago skeleton:
Muckle Thairn



Noble Fir: North Third Res



Scaly Male Fern:
L. Ardingning



Hounds Tongue: Lindisfarne



Field Madder: Muckle Thairn

Viola tricolor:
St Cyrus



Campanula glomerata:
St Cyrus



Purple Iris: L. Ardingning



Early Marsh Orchid



Betony: Dere Street



Thyme and Knawel: Muckle Thairn



Nuthatch: Roslin Glen



Willow Warbler: Dumbreck



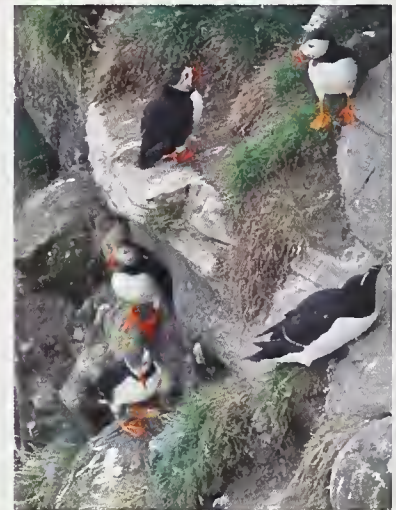
Swallow carrying mud: Lindisfarne



Kittiwake and chicks: Fowlsheugh



Razorbills: Fowlsheugh



Puffins: Fowlsheugh



Little Terns: Ythan



Common Sandpiper North Third Reservoir



Spotted Redshank: Musselburgh



Ruff and Dunlins: Musselburgh

retreated, nature was able to colonise the land slowly and form the varied vegetation found today. The broader, south-eastern Marsh Cinquefoil part of the loch sits in one such glacially-formed kettle-hole, and fine examples of conglomerates can also be found. A dam was built across the outflow of the loch in the early nineteenth century, thus raising the water level and creating the long, narrow north-western arm of the loch.

The south-eastern part of the loch is densely populated with reeds, rushes and sedges and is rich in invertebrate life, including the uncommon Azure Damselfly *Coenagrion puella*, sadly not found this time. In fact, damselflies and dragonflies in general were sparse on this visit, no doubt a result of the harsh winter and the unseasonal spring weather.

In the quarry, we did manage to see a few damselflies: Blue-tailed *Ischnura elegans* and Large Red *Pyrrhosoma nymphula*. On the Nettles we found lots of Blue Nettle Weevil, an insect I had never come across before. Here too, we saw and heard Willow Warbler, Wren and Blackcap.

On the lochside, the following vascular plants were noted: White Waterlily *Nymphaea alba*, Bottle Sedge *Carex rostrata*, Spiked Rush *Eleocharis palustris*, Reedmace *Typha latifolia*, Comarum (*Potentilla*) *palustre*, Common Valerian *Valeriana officinalis*, Marsh Pennywort *Hydrocotyle vulgaris*, Marsh Marigold *Caltha palustris*, Marsh Violet *Viola palustris*, Common Spotted Orchid *Dactylorhiza fuchsia*.

Continuing along the lochside, we saw the only dragonfly of the day, a fresh Four-spotted Chaser *Libellula quadrimaculata*, but sadly it did not sit long enough for everyone to see. Here we also had Sedge Warbler and Reed Bunting.

En route to the higher moorland part of the reserve, we stopped for lunch. Here we were delighted by lots of Swallows and House Martins hawking for insects overhead, a pair of Meadow Pipits, and six Swifts zooming by at eye-level. Moving on, we heard a couple of Cuckoos calling from either side of the moor; we had a brief glimpse of a Sparrowhawk, watched a Mistle Thrush flying past carrying food and noted Skylark, Curlew, and Redshank. Sue and I were undecided about a brief glimpse of a Whinchat, or maybe it was a Wheatear or a Stonechat. Great debate ensued but we did not see it again to be sure.

Before setting off from the car park in the morning, we spoke to the convenor of the reserve, David Shenton,

who was there with a volunteer party. David told us where to find a rarity, Dwarf Birch *Betula nana*. So, when we reached the path to that part of the reserve, six stalwarts peeled off to go look. Quite the largest stand of Dwarf Birch that any of us had seen, at least in Britain, was in a remote part of the reserve. The area (about 18mx10m) was completely dominated by the Dwarf Birch bushes. They were growing vigorously about half a metre in height, with many catkins in the process of fruiting. The new *Atlas of the British and Irish Flora* reveals that this is the only site in Scotland south of the Highland Boundary Fault.

Dwarf Birch



The only other isolated record is in Northumberland, near Kielder. Both are possibly remnants of a much wider Late Glacial distribution. The most abundant associated species were several *Sphagnum* spp., Purple Moor grass *Molinia caerulea* and Harestail Cotton Grass *Eriophorum vaginatum*. Also of note were one or two Downy Birch *Betula pubescens* saplings, the Golden Bog Moss *Aulacomnium palustre* and the Cranberry *Vaccinium oxycoccos*.

Towards the end of the day, the group reunited and headed back towards the car-park. We were rewarded with a Jay flying across the loch, thus ending another lovely day out.

Joanie McNaughton

(with thanks to Neville Crowther for information on vascular plants and *Betula nana*)

BRAID BURN

8 June

Mary Clarkson

The Braid Burn has several sources in the Pentland Hills, among them the Dean Burn, which flows out of Bonaly Reservoir, and the Howden Burn, which rises in the military training area behind Dreghorn Barracks. These two join together in Covenanters' Wood to become the Bonaly Burn, which later changes its name to the Braid Burn.

Giant Butterbur



sward, of Hairy Sedge *Carex hirsuta*. The main interest in Covenanters' Wood (apart from plentiful Salmonberry *Rubus spectabilis* in fruit (which some of us sampled) was in

comparing the leaves of several species of Butterbur, whose flowers were over, to try to decide which belonged to Giant Butterbur *Petasites japonicus*, a garden escape. This is easy to identify when it is in bloom as its flowers look like cauliflowers.

It is hoped that we may follow the Braid Burn (and the Giant Butterbur) farther downstream next year.

Mary Clarkson

NORTH THIRD RESERVOIR

11 June

David Adamson, Wilma Harper

The hills west of Stirling are not dramatic. No major valley separates the Touch Hills from the Fintry Hills, and the Kilsyth Hills and Campsies are very much part of the unspectacular upland area that is seen by passengers on trains travelling between Edinburgh and Glasgow. However, near the North Third reservoir, is a network of paths that allow the walker to explore a rather unusual and, in places, spectacular part of these hills.

The reservoir was created in 1931 by the damming of the Bannock Burn. It is overlooked by the high cliffs of a long quartz-dolerite sill, similar to the rocks of Abbey Craig and Stirling Castle. Our walk started at the south end of this sill, near the Bannock Burn's entry into the reservoir. The morning took in the upland part of the walk and began well with a fly-past from an Osprey. When Wilma pointed out some woodpecker excavations

in a dead tree, a Great Spotted Woodpecker put in an immediate appearance, as if it had heard its name called. Scaly Male Fern *Dryopteris affinis* covered many of the scree slopes with its yellow-green fronds. Near the triangulation point on Lewis Hill, our ex-President scaled some rocks on the cliff face to collect an interesting looking mushroom growing above a steep drop. Unfortunately, it was the very common Larch Boletus *Suillus grevillei*, and perhaps not worth the risk of becoming an ex-ex-President.

The hill vegetation had been typical of many Scottish uplands, with heathers, Mat Grass *Nardus stricta* and other acid-loving plants. However, on the descent, we found woodland plants such as violets and late-flowering primroses. Jean Murray identified a moss as *Sphagnum girgensohnii*, more brittle than most sphagnum species.

After lunch at the reservoir dam, a Common Sandpiper posed for photos. After dawdling to botanise in some base-rich flushes where Marsh Speedwell *Veronica scutellariata* and Comarum (*Potentilla*) *palustre* were in flower, and where a gall caused by a midge *Rhopalomyia ptarmicae* had deformed Sneezewort *Achillea ptarmica*, we descended to a very different habitat. This is an SSSI of Ash, Elm and Hazel woodland between the cliffs of Sauchie Craigs and the Bannock Burn. Dog's Mercury *Mercurialis perennis* covered much of the woodland floor, but we found healthy patches of Oak Fern *Gymnocarpium dryopteris*, Beech Fern *Phegopteris connectilis* and many Common Twayblade Orchids *Neottia (Listera) ovata*. A moss that resembled a very small bonsai tree was *Thamnobryum alopecurum*.

As we were waiting for the car drivers to collect us at the end of the walk, a Raven flew overhead, pursued by a Buzzard, and Swallows flew up and down the burn in pursuit of food. An unusual plant across the road from the lay-by turned out to be Saracen's Woundwort *Senecio sarracenicus (fluviatilis)*, better known from Cramond.

Thanks to Wilma for organising and leading a very interesting walk in an area unfamiliar to most of us.

David Adamson

PHENOLOGY AT THE RBGE

Geoffrey Harper

15 June

It was a lovely evening and a real privilege to be in the Garden when there was no-one else about. Geoffrey gave us an interesting tour and a resume of the work he has been doing. Every day for the last ten years he has been monitoring a long list of plants. He is now analyzing and writing up the results. The work merits a detailed article to explain all his different lines of enquiry and theories, and it

is to be hoped that this will be possible in a future number of the *Journal*.

To give an example of his investigations, he observes ten Poplar trees, noting the number of days from bud-burst to leaf-fall. These trees are clones and come into leaf and into flower within a day or two of each other. This gives the number of days the leaves stay on the trees (2006 - 202 days; 2007 - 201 days; 2008 - 196 days; 2009 - 205 days; 2010 - 194 days). He can then correlate these results with the Garden's weather records. Another line of enquiry is about the 'chilling period' which certain plants require before they can flower. I quote from Geoffrey:

The chilling period is a period of low temperatures that some plants need before they will develop normally in spring. It is a way of protecting the plant from flowering in the autumn, during a warm spell, only to be caught by frost with then no possibility of setting seed. So, first, the plant's flower buds must go into dormancy in summer, and chilling is then needed before they can develop any further. Plants are adapted to the climate in their native range, and in some climates all that is necessary is a short spell of frosty weather at the beginning of winter, since the low temperatures of winter will then keep the plant inactive until the air warms up in the spring. Other plants, in places with a milder winter, need a longer chilling period, since they might be caught out by a short period of cold weather in autumn followed by a warm spell. Our work at RBGE is enabling, for the first time, the timing and 'strength' of the chilling requirement to be measured in a wide range of plants.

It was an interesting evening and an insight into the meticulous work being done at RBGE. Many thanks to Geoffrey.

Sandra Stewart

Footnote A nice distraction at one point was a small family of Bullfinches in the bushes. JM

MUCKLE THAIRN AND LITTLE THAIRN

18 June

Michael Braithwaite

With rain forecast, it was a select group of seven who were rewarded with a good day by the Eden Water in Berwickshire at Muckle Thairn and Little Thairn, the best exposure of the basaltic lavas of the Kelso Trap rocks. The more open grassland has been treated with fertiliser and sprays but boasts massive colonies of Bulbous Buttercup *Ranunculus bulbosus*. The key interest is in the annuals of the grassy areas immediately below the cliffs and in gullies and on shelves along the cliffs themselves. Species seen included Bugloss *Anchusa arvensis*, more often seen as an arable weed, Parsley-piert *Aphanes arvensis* (not *A. australis*, a more

common plant which is extremely similar), Thyme-leaved Sandwort *Arenaria serpyllifolia*, Small-flowered Crane's Bill *Geranium pusillum*, a few good plants of Annual Knawel *Scleranthus annuus*, a profusion of Field Madder *Sherardia arvensis*, frequent Knotted Clover *Trifolium striatum* and a little Squirreltail Fescue *Vulpia bromoides*. Roger Holme found a small colony of Hairy Rock-cress *Arabis hirsuta* in a gully, a rarity in Berwickshire though reported from nearby Stichill Linn in 1893. Perennials seen in the rocky grassland included several colonies of Prickly Sedge *Carex muricata* subsp. *pairae* (*lamprocarpa*), a little Spring Sedge *Carex caryophyllea*, one good and two small colonies of Maiden Pink *Dianthus deltoides* and colonies of Common Rock-rose *Helianthemum nummularium*, Crested Hair-grass *Koeleria macrantha*, Musk-mallow *Malva moschata*, Great Lettuce *Lactuca virosa* and Common Restharrow *Ononis repens*.

Hairy Rockcress



The Musk-mallow is often found round villages as an introduction but it could well be native here and at some similar south-facing sites between here and Melrose. The flushes between the cliffs and Eden Water had much Hard Rush *Juncus inflexus* with noticeably less Soft-Rush *Juncus effusus*. Their hybrid

Juncus x diffusus was also found. Green Figwort *Scrophularia umbrosa* was plentiful in the flushes and by the Eden with Marsh Ragwort *Senecio aquaticus* and a little Yellow Iris

Iris pseudacorus, while an unexpected find was Hybrid Monkeyflower *Mimulus x robertsii* (*M. guttatus x luteus*), not previously recorded from the Eden. A robust fescue was collected by the leader. While it keys to Meadow Fescue *Schenodorus (Festuca) pratensis*, it is unusually large for that species and the lemmas are awned, so it might be the hybrid with Tall Fescue *S. arundinaceus* and will be sent to an expert for determination.

After broadly retracing our steps below the cliffs, we continued upstream through more Bulbous Buttercup to a slightly flushed bank where Quaking-grass *Briza media* and Rough Hawkbit *Leontodon hispidus* were seen before a judicious return to the cars, past the eighteenth century folly Hundy Mundy just as the rain began to fall.

The party had made notable contributions to our knowledge of the flora of the site particularly as to the exact localities of the scarcer species.

Michael Braithwaite

Other wildlife

Animal life was not plentiful, but it is worth noting that a pair of Grey Partridges was flushed below the Hundy Mundy strip, which is the site of a noisy rookery. Yellowhammers and Whitethroats were singing well in the hedges near the entrance track, and a pair of Mute Swans on the Eden Water had five downy cygnets.

Butterflies included Ringlet, Small Copper, a few whites and a female Common Blue. Moths fluttered in the waterside vegetation and included Common White Wave, Yellowshell and Silver Ground Carpet. A Common Carpet was seen on bushes of Muckle Thairn. The most numerous bumble bees were dozens of small worker Red Tails (*Bombus lapidarius*) taking pollen from the meadow flowers. There was a lone Blue-tailed Damselfly beside the Eden Water. Attracting much interest was a newly ‘hatched’ ‘Green Drake’, the angler’s name for *Ephemera danica*. The imago of this three-tailed mayfly had just emerged from its sub-imago’s skin (when mayflies emerge, they quite quickly shed their first skin) which was left hanging beside it under a waterside leaf. Grasshoppers were seen in modest numbers.

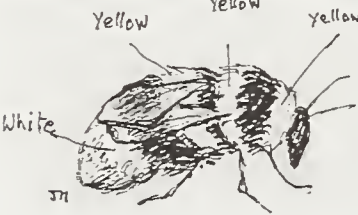
Neville Crowther

CORSTORPHINE HILL

22 June

David Adamson

In June 2010, Dr Brian Moffat led an outing with a botanical theme on a sunlit evening. The only similarities between tonight’s grey, damp outing and that golden memory were the location and the identities of some of those attending.



Bombus hortorum

The theme for this excursion was bumblebees. While plants are fairly predictable in their location and time of flowering, insects tend to disappear if weather conditions are unsuitable.

Bumblebees are hairy insects designed for climates such as our own, and at least nine species live on Corstorphine Hill. Once the wild raspberries are past flowering, the restored Walled Garden is usually the best location on the Hill to find bumblebees. Gordon Swann, of the Friends of Corstorphine Hill, told us that the BBC Beechgrove team had helped to landscape the garden, and that the surrounding wall had been rebuilt after funds had been raised by the Friends. A large number of the plants are native to Scotland, although not otherwise found on the Hill. However, bumblebees are not

necessarily patriotic in their choice of plants, and the few bees we did manage to prise from their torpor were mainly on non-native species.

On garden Angelica were a couple of small workers of *Bombus terrestris* or *B. lucorum* (all bumblebee species are *Bombus* something or other). Although the queens and males of these two species are easily distinguished, the workers (non-reproductive females) are not. At least we were able to tell that these were workers by their short, elbowed antennae and the pollen baskets on their hind legs. On a catmint *Nepeta sp.*, a labiate, were a number of cuckoo bumblebees. As males, all had long antennae, and the colour pattern on the abdomen, particularly the pale yellow side flashes above the grey-white tails, identified these as *Bombus bohemicus*. Cuckoo bumblebee queens take over nests of social bumblebees and make use of the workers of the host species to raise their young, hence the name cuckoo.

The poor weather discouraged bees from foraging for nectar and pollen. However, we did see a long-tongued species, *Bombus hortorum*, on the catmint and on White Dead-nettle *Lamium album*. Some bees appear uncomfortable when people approach, and we saw these bumblebees for only an instant.

After walking to Corstorphine Hill Tower, now open every Sunday afternoon in summer, we returned to our starting point. It says a lot about the increasing interest in bumblebees that 12 enthusiasts turned up on such an inclement evening.

David Adamson

EARLSTON

25 June

Molly Woolgar

A cloudy day, but fair and warm, when a small number of Nats shared a pleasant walk near Earlston in Lauderdale, close to the Leader Water.

We started with a slight climb: on the right, a ‘common’ lies above the main street. Skylarks were singing there and Meadow Pipits feeding young. Hedges lining the narrow road gave safety to Yellowhammer, Chaffinch and House Sparrow. At the highest point (not very high), we branched left, passing a small pond frequented by frogs: on the reeds, there were more House Sparrows and a Wren.

Quail

Now we had fields on either side and then.....the bird of the day! Not seen, but its call ‘wet my lips’ unmistakably meant Quail! The bird seems able to throw its voice, and that, together with its tiny



(7in) size, like a miniature Partridge, means you need a great deal of patience to see one. Formerly scarce in most years, it has been exceptionally plentiful in recent summers.*

Much easier to see were the Lapwings calling and swooping over the fields.

As we followed our path above the main road among conifers and Beech and Ash trees, we looked, unsuccessfully, for Roe Deer. We crossed the road, watched a Meadow Brown on the verge, and then went down some steps to have our lunch, sitting above the Leader Water.

Afterwards, we crossed the river on a bouncy footbridge and followed a footpath through a coniferous woodland, part of which had been cleared. By the river, Lauderdale House is set in parkland: in former days it would have been reached by a long drive which crossed a fine bridge.

After a short walk on the road, we passed a farm with Pied Wagtails on the roof and House Martins and

Swallows flying around and feeding their first broods, which were sitting on handy telephone lines.



Pied Wagtail

Back across the river and into Earlston, past new houses and playing fields: above us a Buzzard, seeing us safely home.

Molly Woolgar

* Footnote: Readers will recall Abbie Marland's article in the 2009 number detailing her experiences with Quail in East Lothian that year.

DALMENY

29th June

Lyn Blades

It was a beautiful evening, with lovely views over the Forth. Thanks to David, we moved faster than the Nats normal pace and managed a reasonably long walk.

There were a few interesting plants by the side of the track, including a good clump of Giant Bellflower *Campanula latifolia*, some Blue Sowthistle *Cicerbita macrophylla* and one large Welled Thistle *Carduus crispus*. In an unlikely site, on the edge of the road, was a large stand of Common Reed *Phragmites australis*. This plant is more often found with its feet in water.

Otherwise six bumblebees were recorded, none unusual. Swallows were around, and other birds singing.

Lyn Blades

BONALY RESERVOIR

13 July 2011

David Adamson

According to Wikipedia, that immaculate font of knowledge, water was piped from Bonaly Pools to Swanston in the eighteenth century. With the building of a shallow embankment, the pools later became a small reservoir, but Bonaly Reservoir in its present form is a mid-nineteenth century creation. Like other reservoirs on the north side of the Pentland Hills, it was built as a "compensation reservoir" to provide water to maintain the flow of the Water of Leith.

It is now operated and maintained by the City of Edinburgh Council, and accessibility from the city brings its own problems. However, like the North Esk Reservoir above Carlops, its retirement from being a working reservoir has allowed it to become one of the best botanical sites in the Pentland Hills.

Where botany is rich, other wildlife does well, and that was evident on this visit. It seems that wildlife prospers in the Pentlands when man builds something and then leaves it to revert to nature. The plants and animals tend to be much more interesting than those of the surrounding closely-grazed hillsides, and the longer the period of neglect, the better the job that nature makes.

Listing the many plant species would make for a dull article, so I will confine honourable mention to the fern Moonwort *Botrychium lunaria*, of which Roger Holme found three healthy specimens on the face of the dam, Twayblade *Neottia (Listera) ovata*, a solitary spike of which was growing beside a large patch of insectivorous Butterwort *Pinguicula vulgaris*, some nine species of sedge, and a population of white-flowering Ragged Robin *Silene (Lychnis) flos-cuculi*, thriving on the south side of the reservoir.

Worth mentioning, above nearby Torduff, though not visited by the group on this occasion, is a healthy population of Cow wheat *Melampyrum pratense*.

The Common Blue and Small Heath butterflies and cuckoo bumblebees were asleep by the time of our visit, but some moths were active, Northern Spinach and Orange Swift among them. As if to emphasise the lateness of the hour, a few of us glimpsed a Tawny Owl as it glided silently into the dark of the conifers.

There were Swifts and Kestrels above the moorland, and John Ballantyne reported a possible sighting of a Merlin. It may have been the thirteenth day of the month, and there were thirteen of us, but we were blessed with both weather and wildlife on this summer's evening.

David Adamson

ABERLADY BAY (in place of Burnmouth)

16 July

Lyn Blades

We set off in pouring rain and arrived at Burnmouth in pouring rain. Only two cars turned up, and so we first went for a cup of coffee and then decided to call it a day.* On the way home, however, it seemed to brighten up a bit, and our car-load made a quick decision to stop off at Aberlady Bay.

We spent some time on the saltmarsh near the bridge and were rewarded by a nice selection of saltmarsh plants including Seablite *Suaeda maritima*, Saltmarsh Flat Sedge *Blysinus rufus*, Glasswort *Salicornia* sp, Sea plantain *Plantago maritima* and Sea Arrowgrass



Triglochin maritima (it's always useful to see those two together).

None of these plants produces attractive flowers, but Sea Aster *Aster tripolium* and Greater Sea Spurrey *Spergularia media* provided *Saltmarsh* colour, while Mary

Flat Sedge

Clarkson winkled out Hard Grass *Parapholis strigosa*. One of the least charismatic grasses you're likely to see, it is rare in Scotland and not easy to find among other grasses and sedges. Later, however, on damp turf, we checked out one of the more attractive grasses, Quaking Grass *Briza media* along with Marjoram *Origanum vulgare*, Grass of Parnassus *Parnassia palustris* and a variety of Orchids with Common Twayblade *Neottia (Listera) ovata* putting on a particularly good show (I think it has had a good year).

The weather remained warm and only slightly damp, eventually brightening up enough for a few butterflies to put in an appearance – mainly Meadow Browns. As we drove back to Edinburgh we became aware of black clouds ahead but were still astonished to find ourselves driving through floods and heavy rain by the time we reached Craigmillar. So the day ended as it had begun. Was it still raining at Burnmouth I wonder?

Jackie Muscott

*This was the easiest outing I have ever led, car park to coffee shop. Earlier in the week we had had a beautiful sunny day for the recce, with lots of flowers and butterflies. Maybe next year the weather will be kind.

Lyn Blades

CARLOPS

23 July

Michael Jones

On Saturday, after a week that had witnessed thunder, lightning and flash floods in the town, a cheerful group of seven met in Carlops car-park to explore the SSSI's surrounding the village.

Running south-west for about three kilometres, the deep cleft known as Windy Gowl or Carlops Dean is an SSSI designated for its complex of glacial melt-water channels. It also offers an interesting range of flora, particularly on the slopes of three base-rich hummocks that rise from the flattish floor of the valley. Although the water flows have been canalised, large areas remain wet and boggy, holding attractive plants including Marsh Hawksbeard *Crepis paludosa*, Bog Bean *Menyanthes trifoliata*, Comarum (*Potentilla*) *palustre* and many sedges such as Spring Sedge *Carex caryophyllea*, Star Sedge *C. echinata* and Flea Sedge *C. pulicaris* along with Common or Black Sedge *C. nigra*. However, our objective was to search the largest mound in the Carlops Dean section: after carefully, and politely, edging past the six bulls that were crowding the gateway, we approached the south-facing slope which was profuse with a showy mix of Thyme *Thymus polytrichus*, Bird's Foot Trefoil *Lotus corniculatus*, Mouse Ear Hawkweed *Pilosella officinarum* and Rock Rose *Helianthemum nummularium* with a scatter of Harebells *Campanula rotundifolia* and Devil's Bit Scabious *Succisa pratensis*. Quaking Grass *Briza media* and *Danthonia decumbens* were also present, and our target species, Field Gentian *Gentianella campestris*, was discovered at the farther end of the ridge. Many plants in good bloom were scattered over the slope.



Heath Grass

Proceeding a little way down the valley, we arrived at the entrance to Jenny Barrie's Cave; a natural fissure which stretches about 100m into the hill for those prepared to crawl! The entrance has been enlarged at some time, probably in connection with the lead-mining that took place in the locality. Bits of broken rock around showed traces of lead ore, and some old spoil heaps still remain more or less barren.

A lone Hart's Tongue Fern *Asplenium (Phyllitis) scolopendrium* was discovered in the gloom of the cave, while the cold, clear stream supplied a large bed of green

Watercress *Rorippa nasturtium aquaticum*. Chimney Sweeper moths were frequent, and other moths included Treble Bar and Large Yellow Underwing. Butterflies were common, and it was good to find the Common Blue and the swift Dark Green Fritillary among the eight species recorded through the day.

After lunch beside the Gentians, we walked the kilometre and a half up to the North Esk Valley SSSI, designated for both Biology and Geology, to examine an area of base-rich, flushed grassland. Here we found Broad Leafed Cottongrass *Eriophorum latifolium*, Butterworts *Pinguicula vulgaris* and many sedges, with a small meadow of Brown Sedge *Carex disticha* by the burn side. Higher up the slope there grew a patch of Beech Fern *Phegopteris connectilis* and Bracken *Pteridium aquilinum*. A good find was the geometrid moth Purple Bar.

Moving off through the Fairliehope Wood to walk the lower part of the SSSI, we saw Spotted Flycatcher and Tree Creeper: Nuthatch was heard as were Buzzards as they circled overhead. Meanwhile, the ?President? (?Neville) had contrived a splendid viewing of a fungus, the Orange Grisette *Amanita crocea*, said to be edible, but I would be wary of any of such a poisonous genus.

The last leg took us down the valley of the North Esk, past remnants of scrub on small steep banks and scattered bushes of Eared Willow *Salix aurita*. Beside the path were a few plants of Mountain Everlasting *Antennaria dioica* and good areas of Rock Rose. A little further on were found several Six-Spot Burnet moths. Swallows, House Martins and Sand Martins were all seen feeding on insects. The last stop was at a wet meadow, dominated by Water Avens *Geum rivale* and with a few plants of Twayblade *Neottia (Listera) ovata*. We ended up back at the car park beneath the Carlins' Loup, as the large rock is known. In ancient times this rock, and its opposite across the road, stood so close "that a cart could scarce be driven between them", and Carlops was a cul-de-sac: it was then that the witches, or Carlins, used to leap between them. It is said that Carlins' Loup could be the origin of the name Carlops.

Michael Jones

AUCHTERMUCHTY COMMON

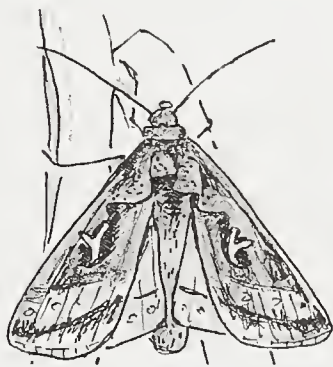
30 July

Neville Crowther

It was a warm and sunny day by the time 14 of us assembled at the site. A picturesque feature of the Common is the Gypsy caravan where James O'Connor, whom we met on our previous visit, has lived for the last decade Sadly, a bout of vandalism during the year had resulted in much damage to his property. We found him busy repairing his caravan, carts and traps, but quite sanguine about his safety.

Our experience last year had allowed us to plan this year's visit at the optimum period for insect life. However, we were to be disappointed by the weather of both the year and the day and its influence on insect numbers.

Butterflies were infrequent, though it was gratifying to see a few Dark Green Fritillaries. Moths were more numerous. Species typical of grassland and ruderal vegetation included Six-spot Burnets, Shaded Broad Bars, Antlers, Grass Veneers and the pyralid *Udea lutealis*. Less common were Grass Rivulets, Brown-line Brighteyes and a few migrant Silver Ys.



David recorded five species of bumblebee, the most common being *Bombus pasquorum*, but there were few other expected insects, even hoverflies.

Silver Y

Flowering herbs included the tall and colourful Field Scabious *Knautia arvensis*, Harebell *Campanula rotundifolia*, Common Toadflax *Linaria vulgaris* and Slender and Perforate St John's Worts *Hypericum pulchrum* and *perforatum*. The many calcicoles were indicative of the base-richness of the soil. They included Thyme *Thymus polytrichus*, Burnet Saxifrage, *Pimpinella saxifraga*, Lady's Bedstraw *Galium verum* and Burnet Rose *Rosa spinosissima (pimpinellifolia)*. Numbers of large 'Robin's pincushions' were noticed. This is the red, hairy gall of a wasp *Diplolepis rosae*, found on several rose species. A few Buzzards were soaring overhead, and Linnets sang in the shrubbery. The most unusual birds were three pairs of Spotted Flycatchers and one reeling Grasshopper Warbler.

Some of our party left for home in late afternoon, but the rest trooped down the burn to Glasserts Den, hoping that our fortune would change. There was little to report, however, and our departure was not long delayed.

Neville Crowther

Footnote: Jean Long was the first to notice an uncommon smut on the Field Scabious. The smut *Bauhinus flosculorum* hijacks the anthers, replacing pollen by a deep-purple spore-mass. The unusually large population of Scabious was quite heavily infected.

Jackie Muscott

BADDINSGILL (in lieu of Glenshee)

6 August

Jackie Muscott

The trip to Glenshee had to be cancelled because the leader was taken ill a couple of days beforehand. However, on the way to recovery by the afternoon of the cancelled excursion, she joined a small group of botanists determined to take advantage of the rest of the day.

We drove up to Baddinsgill Farm, just south of the Reservoir, and followed the Baddinsgill Burn upstream. The area by the river has a nice mix of somewhat-acid to somewhat-calcareous vegetation. As well as *Bristle Club-rush* various sedges and Marsh Bedstraw *Galium palustre*, there were lime-lovers Fen Bedstraw *G. uliginosum*, in wet areas and Quaking Grass *Briza media* and Downy Oat Grass *Avenula pubescens* elsewhere. Other marsh plants included Ragged Robin *Silene (Lychnis) flos-cuculi*, while Harebell *Campanula rotundifolia* and Wild Thyme *Thymus polytrichus* bloomed in drier areas.

As the hill became steeper, we encountered heathland, with Lesser Twayblade *Neottia (Listera) cordata* nestling beneath the heather, and eventually arrived at a bog among trees above a small dam. Here we found Bog Asphodel *Narthecium ossifragum*, Cranberry *Vaccinium oxycoccos* and Round-leaved Sundew *Drosera rotundifolia* along with more sedges and cotton Grasses.

Bristle Club-rush

Returning via the track, we investigated a very attractive flush and added Bristle Clubrush *Isolepis setacea* and Marsh Arrowgrass *Triglochin palustris* to the list.

Not quite Glenshee, but not bad for an afternoon outing within easy reach of Edinburgh.

Jackie Muscott

DERE STREET

13 August

Mary Clarkson

Our linear walk started at Harestanes in the Borders, near the village of Ancrum and not far from Maxton. We were to follow the Roman road, Dere Street (now also part of the recently designated St. Cuthbert's Way from Melrose to Lindisfarne). Along our way, we would pass the site of

the Battle of Ancrum Moor (1545) at Lilliard's Edge (of which, more later) and end up at Forest Lodge.

Even before we left Harestanes, the weather was looking mixed. However, a spell of sunshine brought out scores of Marmalade Hoverflies *Episyrphus balteatus*, feeding on Nipplewort *Lapsana communis*, Ragwort *Senecio jacobaea* and Creeping Thistles *Cirsium arvense*. Above, Swallows, House Martins and Sand Martins were all feeding young on the wing, and we heard the mewing of Buzzard families over the woods.

The combination of rain and sunshine in the previous few weeks had produced lots of fungi. Stump Puffballs *Lycoperdon pyriforme*, by the score, adorned every rotting log. Amanitas, especially the Blusher *A. rubescens* were common. The Orange Grisette *A. crocea* was beautifully symmetrical. Wood Mushrooms *Agaricus sylvaticus* were common and, when mature and black, 15cm wide across their caps. There was even a Yellow Stainer *Agaricus. xanthodermus* a rare but dangerous species, which stains pycric yellow when scratched. Be warned! *Russulas* were also common, especially under Beech: *R. laurocerasi* smelling of marzipan; the dark purple *R. atropurpurea* and the bright red, white-stalked Beechwood Sickener *R. nobilis (marei)*, both frequent. Although we recorded the Ugly Milkcap *Lactarius turpis*, the commonest milkcap was the Beechwood Milkcap *L. blennius*.

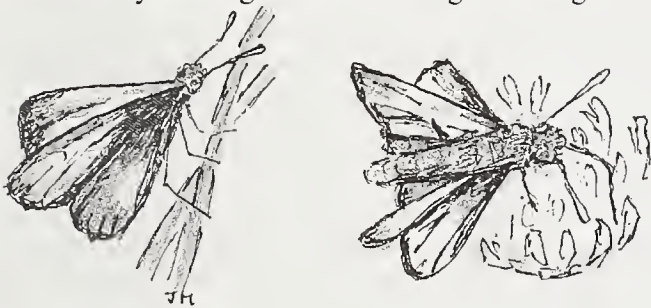
In deep shadow on the steep bank of the burn we were following, we found a stand of Shaggy parasols *Macrolepiota rhacodes*, cream-coloured and photogenic. Many of us could not resist reaching for our cameras. Two *Collybia* species, *C. dryophila*, with a wavy cap, and the very common *C. confluens* trooped in the leaf litter under most Birches.

Leaving the woodland, we found the line of the Roman road was still quite obvious after almost two millennia. We followed an intermittent line of ancient trees north-westwards along its route for almost four miles. Bird life included Linnets, Yellowhammers and a high-flying Peregrine, thanks to Tom's sharp eyes. Flowering plants became more numerous: these included thistles and willowherbs with attendant insects, especially hoverflies and micromoths such as Grass Veneers *Agrophila* sp. and the pyralid moth *Udea luteali*. There were stands of delicate Harebells *Campanula rotundifolia* and among them groups of grassland fungi such as *Calocybe carnea*, the dung fungus *Paneolus rickenii* and the Yellow Club *Clavulinopsis helvola*. Also present was Choke *Epichloe typhina* a fungal parasite of grasses. A couple of woodland fungi worth mentioning were the Oily Waxcap *Hygrophorus quieta* under trees and scores of the rich-purple fruiting bodies of the Amethyst Deceiver *Laccaria amethystina*.

At Lilliard's Edge, close by the track, there is a small enclosure with a low, stone wall on which there is a plaque bearing the inscription: 'A local lass from Maxton followed her lover to the battle of Ancrum Moor. Sword in hand she fought the English, her epic deeds being immortalised in the following verse':

*Fair maiden Lilliard lies under this stane
little was her stature but muckle was her fame
upon the English loons she laid monie thumps
and when her legs were cuttit off
she fought upon her stumps.*

Unfortunately, the tale it recounts is entirely apocryphal. Fortunately, for the Scots side, the battle was a success and, for a time, put a stop to the ruthless harrying of Scotland by the English in the 'Rough Wooing'.



Small Skipper

Entomologically, the last mile was quite notable. In the grassland there had been a big emergence of Shaded Broad Bar moths *Scotopteryx chenopodiata*. We had three adults of Small Skipper butterfly *Thymelicus sylvestris*, a recent invader of Scotland. This turned out to be a first record for the hectad. Two of the Skippers were on Betony *Betonica (Stachys) officinalis*, a large stand of which surrounded the Maid of Lilliard stone. Just beyond here, David recorded two cuckoo bumblebees, *Bombus campestris* and *B.bohemicus*. A chance photo of yet another cuckoo bumblebee may be of *B. vestalis*. It remains to be confirmed.

Mary Robertson and Neville Crowther

A HISTORICAL PERSPECTIVE

During the Roman period, the main route from the legionary fortress at York (Eboracum) to the wild unconquered lands to the north was along the road now known as Dere Street. The modern A1 follows the same route to Scotch Corner, and then the A68 follows it through Corbridge (Corstopitum) and High Rochester (Bremenium). After crossing the hills on the line of the modern Scottish border, Dere Street soon adopted a very straight north-westerly route towards Newstead (Trimontium). The fort there was one of the largest and most continuously occupied in Scotland from about 79-

211 AD. Beyond Newstead, the road led to Elginhaugh near Dalkeith, and then on to Inveresk, Cramond and ultimately to short-lived Roman forts and camps as far north as the Moray Firth.

Our walk began near Monteviot, where Dere Street must have crossed both the Jed Water and the River Teviot. The actual crossing points and the link between them are not known, and, as we walked along a shelter-belt from the Harestanes Visitor Centre, the line of the road was not evident. However, the mound of the road became clear after we had climbed up a steep slope through a wood above a little stream called the Marble Burn. Further on, we were in open fields, and on the north-east side of the path there was a dry-stane dyke along the ridge of the road.

After climbing over a fence, we entered a section where the wall continued on the north-east side. About 12 feet to the south-west, there was a ditch and bank with old Oak and Ash trees. Just beyond the trees, a wide strip of rough, uncultivated ground with occasional hollows showed where there had been quarry pits from which some of the metalling for the road had been obtained. In several places, substantial trees were growing on the line of the road, and it was noticeable that the roots of the trees were very close to the surface. The steep road leading up to Lilliard's Edge was in a cutting, but it is not clear whether this was natural, Roman or post-Roman in origin. Although evidence of the road was still present beyond this point, it was much less obvious. Finally, just beyond Forest Lodge, the line merged with that of the modern A68 and headed for St Boswells, Newstead, Edinburgh and home.

Denis Smith

LINLITHGOW PALACE

17 July

Natalie Todman

We met at dusk in the car-park of Linlithgow Palace to go hunting for its legendary bats. Armed with bat-detectors, we set off for a stroll around the Loch, waiting for the first bats to appear. Bat-detectors convert the bats' ultrasonic calls into clicks and whistles audible to human hearing. Listening to the pitch, rhythm and repetition rate of the calls, it is usually possible to identify the species being heard. As expected, the first bats we heard were Soprano Pipistrelles; these are the most widespread and abundant of the Scottish bats and usually first heard about 30 minutes after sunset. Until about 15 years ago only one species of pipistrelle was considered to be resident in Britain. However, since then, research has shown that Common Pipistrelle is in fact, two distinct species, now known as Bandit Pipistrelle and Soprano Pipistrelle. A third species, Nathusius' Pipistrelle, once thought to be only an occasional visitor, though still rare, is now known to be breeding at several sites in Britain.

Interestingly, Soprano Pipistrelles are more common than the Bandit Pipistrelles in Scotland, but this situation is reversed south of the border. Although most of the pipistrelles on the wing around the Loch were Soprano, we did get the occasional Bandit as well, which gave us a chance to compare the sound of each species' echolocation on the bat-detector.

Linlithgow Palace is perhaps best known for the large maternity colony of Daubenton's Bats that roost there through the summer. Daubenton's Bat is also known as the water bat for its habit of feeding low over water, snatching insects from just above or on the water's surface, they have even been known to take small fish occasionally. Daubenton's, which emerges 45-60 minutes after sunset, was our next target species, and we were not disappointed. As they hunt so close to the surface of the water, they echolocate very quickly to avoid accidentally touching the water; and this gives them a distinct sound on a bat detector - a very rapid series of regular, dry-sounding clicks, somewhat reminiscent of the sound of a Geiger counter. It was nice to be able to hear these and compare them to the slappy, erratic sounds of the pipistrelles.

So, all in all, an enjoyable evening with three bat species, some lovely views and good company.

Natalie Todman

BELHAVEN BAY

20 August

Bill Clunie

We were 20 strong by the time we assembled in the car park of the John Muir Country Park. Hirundines of all three species hawked for insects overhead. Some may have been local breeders with late broods, but we thought most to be migrants. Batches of Goldfinches and Linnets flew back and forth from the marshes to the woods. Bill decided that we should look at Seafield ponds and the Biel Burn first, before following the dunes and saltmarsh round into the Tyne estuary.



Strawberry Clover

Soon, Molly at least, was rewarded by a Kingfisher fleeing up stream away from the dogs and children near the beach. The ducks at Seafield were all in eclipse and quite boring, but one Dabchick and a fast swooping Sparrowhawk were more exciting. All five common gull species were seen on the seaward side of the wall. About a dozen Greater Black-

backed Gulls were notable. A large stand of Tansy *Tanacetum vulgare* was at its best, attracting scores of hoverflies. The walls alongside the burn were festooned with Pellitory (of the wall) *Parietaria judaica*, nearing its northern limit on the east coast. Along the tops of these walls was draped Hoary Cress *Lepidium* (*Cardaria*) *draba*, a fairly recent introduction, in fruit.

Ribbed Melilot *Melilotus officinalis* and Strawberry Clover *Trifolium fragiferum* grew well along the tide-line, with occasional tufts of the very local Distant Sedge *Carex distans*.

On the high salt-marsh, the silver masses of Sea Wormwood *Seriphidium maritimum* (*Artemisia maritima*) contrasted with the greens of other halophytes. These included Common Saltmarsh Grass, *Puccinellia maritima*, Sea Plantain *Plantago maritima*, Sea Aster *Aster tripolium*, Lesser Sea Spurrey *Spergularia marina*, Annual Sea-blite *Suaeda maritima* and in the lower marsh Sea Milkwort *Glaux maritima* and Marsh Samphire (Glasswort) *Salicornia* sp: the latter, was once harvested here as a vegetable and as a source of soda for glass-making. Growing in pools on the edge of the marsh was Celery-leaved Buttercup *Ranunculus sceleratus*.

The sunshine here was warm, and several Common Darter dragonflies basked on bleached driftwood logs. Orb spiders *Araneus* sp. spun their webs in the tall grasses, and a Cloaked Minor *Mesoligia furuncula bicoloria* nectaring on Ragwort was a new moth species for me. On the seaward edge of the marsh, among a few Skylarks and Pied Wagtails we found a juvenile Yellow Wagtail, probably fledged locally, East Lothian being their most northern UK coastal breeding site. Lunch was taken, out of the wind, behind a sand dune beyond which was the estuary.

Regrettably the tide was out, and the birds far away, but, as we resumed our walk towards the Hedderwick Burn bridge, we did see about ten Mute Swans, numerous gulls and heard the 'squarking' of Sandwich Terns. To the envy of others, Joanie watched a passing Osprey. Some birds lurking in Heckie's Hole were identified by scope and included three Little Egrets, five Greenshanks and a mixed flock of Dunlins and Ringed Plovers. Oystercatchers and Curlews were numerous and more obvious, as were flights of Greylag Geese moving into the inner estuary.

The party numbers had started to decline after lunch. Diverted botanists and others with weary legs were the main culprits. After joining the John Muir Way at the bridge, we followed it westwards, getting much better views as the estuary narrowed. More Greenshanks, one juvenile Shelduck and six Golden Plovers were quickly ticked off. Two family parties of Goosander totalling 16 birds paddled indecisively up and down the Tyne as the



ebb began to meet the incoming tide. Over on the Tynninghame shore, around 200 Greylag Geese and a small group of Canada Geese sprawled in the sunshine, preening. We had further sightings of the same Little Egrets before turning for home. On the way, we flushed another female Sparrowhawk from a Scots Pine and in the last few yards before the car-park, Sue picked some large and elegant Parasol mushrooms *Macrolepiota procera*, which we were to fry with bacon the following morning.

Neville Crowther

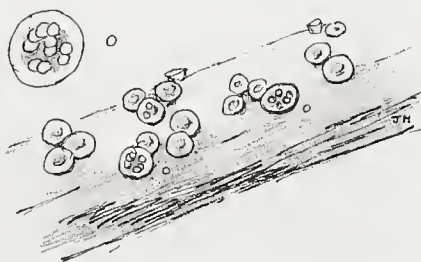
PAXTON

27 August

Neville Crowther

Paxton House, on the banks of the Tweed, a few miles from Berwick, is a long drive from Edinburgh, but we were rewarded with a most enjoyable and interesting day there. The outing started with a visit to the Red Squirrel Hide and the Ice House, both standing above a stream flowing directly into the Tweed. Sadly, no Red Squirrels were seen but members of the group did spot Coal, Great and Blue Tits, a Great Spotted Woodpecker and a Nuthatch. On the wooden steps leading up from the Ice House, we found Common Bird's Nest Fungus *Crucibulum laeve*, looking just as its name suggests, with tiny lens-shaped 'eggs' (containing spores) in a nest-like container. In this area too, on the stream banks, were Hartstongue *Asplenium* (Phyllites) scolopendrium and Hard Shield *Polystichum aculeatum* Ferns. Our path led through mixed woodland where fungi were plentiful, including large Parasol Mushrooms *Macrolepiota rhacodes* whose stems turn red when damaged.

Common Bird's
Nest Fungus



We were lucky to reach the Tweed at a point where a family of Mute Swans (parents and four cygnets), were hugging the bank so that we had an excellent view of them and, opposite, a group of five Goosanders. Farther downstream there was a large party of Mute Swans. A variety of plants on or near the riverbank included Pellitory of the Wall *Parietaria judaica*, Marjoram *Origanum vulgare*, Lords and Ladies *Arum maculatum* in fruit and Keeled Garlic *Allium carinatum*, as well as the invasive Himalayan Balsam *Impatiens glandulifera* and the Pirri-pirri Bur *Acaena novae-zelandica*.

The most interesting part of the excursion, to my mind, was also on the riverbank, where a team from the Tweed Foundation was catching Salmon and Sea Trout and tagging them. An oarsman rowed across the river in a small boat trailing a net, waited until he thought a fish was in the net and then rowed quickly back again. There was great excitement among spectators as the net was pulled in and the catch emerged, usually one fish. This was quickly put into a tank of river water containing an anaesthetic to calm it while a 'visual' tag was fixed to its dorsal fin or an acoustic tag implanted. In addition, information was recorded on its length, sex, age (from its scales) and how long it had been in the river (from the number of sea lice it carried). There are two objectives for this research: to estimate the proportion of fish being caught by anglers and to estimate the number of fish in the river. For Sea Trout an additional purpose is to find out where they go when they leave the river after spawning. After tagging, fish were gently returned to the river as quickly as possible.

We returned to the House via the garden and enjoyed tea and cake in the café to round off the day.

Mary Clarkson

CALDER WOODS

17 September

Mike Richardson

Four members met me under grey skies in the housing estate at Spottiswoode, at the infill between Midcalder and Livingston, to collect fungi in this old Beech-Oak-Birch woodland between the Linhouse and Murieston Waters. An old rhyme goes:

Calder Wood was fair to see,

When it went to Camilty ;

Calder Wood was fairer still

When it went to Crosswood-hill

The Murieston Water comes from the Bog Burn, which in turn comes from Cobbinshaw, the source of water for the Union Canal: the Linhouse originates in the Pentland Hills. Recent rainfall and some slightly elevated temperatures meant that there were plenty of fungi to be found, although not always in the best of condition: a quick list produced about 80 species, without any really diligent collecting. Long grass in the open areas meant that there were few Waxcaps and other fungi that like short-cropped turf, but the area is abundant in fallen Birch and Beech trees and, for me, the most interesting fungi were *Helvella lacunosa*, *Merulius tremelloides*, *Plicaturopsis crispa* (the last two both on Birch) and the ergot *Claviceps purpurea*, a common fungus – it wasn't difficult to find infected grasses with which to point them out – *Dactylis*, *Holcus*, *Deschampsia*, *Lolium*, *Anthoxanthum*, – and there were plenty of Brittlegills *Russula* and Millcaps *Lactarius* species. Vladimir found a tiny newt, wandering along a path, , and David found three ibeautifully rridescent Dor Beetles

FUNGI FOUND IN CALDER WOODS

<i>Amanita crocea</i>	<i>Lactarius turpis</i>
<i>Amanita muscaria</i>	<i>Leccinum scabrum</i>
<i>Amanita rubescens</i>	<i>Leccinum versipelle</i>
<i>Armillaria</i> sp.	<i>Lycoperdon echinatum</i>
<i>Auricularia auricula-judae</i>	<i>Lycoperdon perlatum</i>
<i>Bolbitius titubans</i>	<i>Lyophyllum decastes</i> ?
<i>Calocera cornea</i>	<i>Melampsorium betulinum</i>
<i>Camarophyllus virgineus</i>	<i>Merulius tremellosus</i>
<i>Claviceps purpurea</i>	<i>Microsphaera alphitoides</i>
<i>Clavinulina cinerea</i> ?	<i>Mycena alcalina</i> ?
<i>Clavinulopsis helvola</i>	<i>Mycena galericulata</i>
<i>Clitopilus prunulus</i>	<i>Mycena pura</i>
<i>Collybia butyracea</i>	<i>Nectria cinnabarina</i>
<i>Collybia peronata</i>	<i>Nolanea cetrata</i>
<i>Coprinus atramentarius</i>	<i>Oudemansiella mucida</i>
<i>Coprinus comatus</i>	<i>Paxillus involutus</i>
<i>Coprinus micaceus</i>	<i>Phallus impudicus</i>
<i>Coriolus versicolor</i>	<i>Pholiota squarrosa</i>
<i>Cortinarius species</i>	<i>Phragmidium violaceum</i>
<i>Crepidotus mollis</i>	<i>Piptoporus betulinus</i>
<i>Dacrymyces stillatus</i>	<i>Plicaturopsis crispa</i>
<i>Galerina</i> sp	<i>Pluteus cervinus</i>
<i>Ganoderma applanatum</i>	<i>Psathyrella hydrophila</i>
<i>Hebeloma crustuliniforme</i>	<i>Russula atropurpurea</i>
<i>Hebeloma sacchariolens</i>	<i>Russula betularum</i>
<i>Helvella lacunosa</i>	<i>Russula claroflava</i>
<i>Hydnum repandum</i>	<i>Russula cyanoxantha</i>
<i>Hygrocybe chlorophana</i>	<i>Russula farinipes</i> ?
<i>Hypholoma fasciculare</i>	<i>Russula fellea</i>
<i>Hypoxyton fragiforme</i>	<i>Russula mairei</i>
<i>Inocybe</i> sp	<i>Russula nigricans</i>
<i>Laccaria amethystina</i>	<i>Russula ochroleuca</i>
<i>Laccaria laccata</i>	<i>Stereum hirsutum</i>
<i>Lactarius camphoratus</i>	<i>Stropharia semiglobata</i>
<i>Lactarius fluens</i> ?	<i>Trametes versicolor</i>
<i>Lactarius glyciosmus</i>	<i>Tremella foliacea</i>
<i>Lactarius pubescens?</i>	<i>Tricholoma ustale</i>
<i>Lactarius subdulcis</i>	<i>Ustulina deusta</i>
<i>Lactarius tabidus</i>	<i>Xylosphaera hypoxyton</i>

Mike Richardson

HERMITAGE

24 September
Wilma Harper

Ten members gathered in the top car-park at the Hermitage, by Dunkeld in Perthshire. As Wilma outlined the plans for the day, a Small Tortoiseshell flew by, taking benefit of the early autumn sunshine,

As we walked towards the Hermitage folly, we found the first notable fungus of the day, *Helvella crispa*. Later, its close relative, *H. lacunosa* was also found. Surrounding the pool, there is a fine stand of specimen Douglas Firs: one of these was the first tree in Scotland to be confirmed as over 200 feet tall - about the same height as the Scott monument in Princes Street.



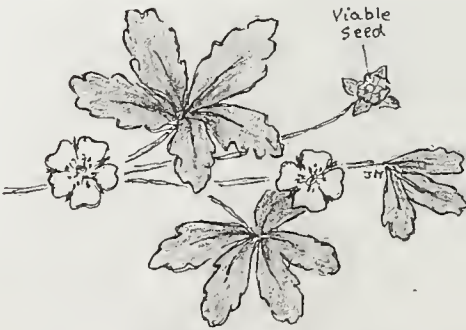
Helvella lacunosa

At the Hermitage, the falls were in spate following the wet summer.

Members were thrilled to watch large fish attempting to jump the falls, despite the torrent of water. Some of our quick-fingered photographers managed to capture good images. We assumed these were Salmon, but it was noted that, sometimes, Trout also exhibit this behaviour.

We visited a small planted area containing saplings of the Chilean Plum Yew *Prumnopitys andina*. This podocarp is at risk of extinction in its native Andean regions of Southern Chile and Argentina. Through collaboration between Forest Research, RBGE and a Chilean university, an improved germination rate has been achieved, allowing cultivation of the species from seed. The saplings appeared to be doing well, though some had been frost damaged in the recent severe winters.

An interesting *Potentilla* was found growing on both sides of the track heading towards Craig Vinean: members present were not sure as to its identity, and so it was later reported to the Mid-Perthshire botanical recorder, Alistair Godfrey, who identified it as Trailing Tormentil, *Potentilla anglica*, a new record for this hectad.



Trailing Tormentil

The walk took us on to Pine Cone Point, where a clever design symbolising a pine cone has been constructed using local timber. The point

provides a convenient place for a rest and offers superb views over the Tay valley.

As we walked down from the Point, we found another interesting plant: a Pirri-pirri Bur, with two fruiting heads. A photograph was taken, and it was later identified as Two-spined Acaena *Acaena ovalifolia*. This is an invasive species that is just starting to appear in central Scotland. It was reported to the Forestry Commission Rangers and was removed later that week.

Nearby, members watched Crossbills high up in the Norway Spruce, and we were also delighted to spot a Red Squirrel climbing a nearby tree.

Other notable fungi seen during the day were *Leptopodia elastica*, *Paxillus atrotomentosus* and *Sparassis crispa* the Wood Cauliflower

Roger Holme

Footnote: Trailing Tormentil is an interesting plant, as it is believed to be of hybrid origin: it has the general character of Creeping Cinquefoil Potentilla reptans but has many 4-petalled flowers typical of Tormentil P. erecta. The original cross was probably infertile but then doubled its chromosomes (it has twice as many as either parent) and is now a fully fertile species. It has a bad habit of back-crossing with both its parents, and P. mixta (= P. anglica x P. reptans) is very difficult to distinguish from it but is infertile – so it's important to check for good seed.

Jackie Muscott

MORTONHALL ARBORETUM

8 October

Eunice Smith

Mortonhall Arboretum was selected for a fungus walk at the end of the season because it has lots of trees and potential for interesting fungi. The arboretum is on the outskirts of Edinburgh and has a car-park area, two cafes and associated facilities. What could possibly go wrong?

Elizabeth Farquharson kindly agreed to accompany me on a visit the week before the Society foray, and we (accompanied by Denis) searched the grounds for fungal specimens. However, despite our combined efforts, the only fungus found in the entire arboretum was the (very common) Tarspot (*Rhytisma acerina*) on Sycamore leaves.

Sadly the tale of the lack of fungi within the Edinburgh area did not stop there. Frantic visits on a later day to known sites at Hawkhill Wood and another wood near Craigmillar Castle yielded little more. The area

surrounding Blackford Pond seemed to be similarly bereft of mycological interest, although a felled birch exhibited beautiful, symmetrical spalting across the whole trunk, the effect being due to competing fungi. At lastBlushing Bracket *Daedaleopsis confragosa* was spotted on Rowan (an unusual host), but surely that could not be expected to enthral Society members for a whole day!

On the due date, a small group of enthusiasts gathered at Mortonhall. As we passed around some dried fungal specimens, the rain started, and we decided to put our trust in Neville Crowther's suggestion that we visit Glencorse Wood.

At last fungi galore! As we crossed the roadway from the cars, we could already see that we had made the right decision. We had a diligent group and were able to find and identify more than 30 species without recourse to books or other aids. The common fungi included the orangey-red dots of Coral Spot *Nectria cinnabarina* and the floppy, jelly-textured Ear Fungus *Auricularia auricula-judae* on twigs and small branches. Perhaps of more interest were the colourful Fly Agaric *Amanita muscaria*, the Blusher *Amanita rubescens* and the Clouded Agaric *Clitocybe nebularis*. We sniffed the Root Rot of conifers *Heterobasidion annosum* and the Coconut Milkcap *Lactarius glycosmus* with their respective smells of turpentine and coconut. Our noses also guided us to locate the Stinkhorn *Phallus impudicus*.

I was pleased to see Blushing Bracket so soon again, but lots of Tarspot here too brought to mind our earlier desperate searches for fungi! However, the widespread appearance of Tarspot is not a matter for gloom: it indicates an absence of sulphur in the atmosphere. Fungi, whether present or absent, always have significance.

Eunice Smith

VANE FARM

29 October

Joanie McNaughton

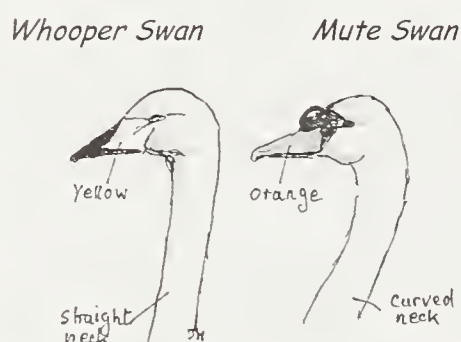
The forecast was for a rainy day but, luckily, it proved inaccurate, and we had just one heavy shower on our arrival at the RSPB's Vane Farm reserve. A stiff easterly wind kept the clouds moving and enlivened our expectation of Fieldfares and Redwings arriving from Scandinavia.

The influx of Pink-footed Geese from Iceland was reported to be in full swing, with numbers expected to peak around 20,000 in early November. The recent work to create new wetland areas had left the landscape looking rather raw, and most of the geese that had already arrived were out feeding on the fields.



Greylag Goose Pink-footed Goose
(both have pink feet)

From the Gillman hide we saw Whooper Swans, Pink-footed and Greylag Geese, Teal, Mallard, Grey Heron, Pochard, Wigeon, Tufted Duck and, a highlight for many of us, a group of 12 Pintails. Goldfinches came to the feeder beside the hide.



No.3 hide was out of action, as it has been built on an island to which the bridge had not yet been constructed. We viewed more wetland from No.2 hide, where we saw

Heron, large numbers of Lapwings, with Curlews flying in. A Snipe flew off with its customary zig-zag flight, apparently flushed by a Buzzard.

We were not fortunate enough to see the White-fronted Goose or female Smew which had been recorded the previous day. Nor did we see any of the White-tailed Eagles which had been released in the East Neuk of Fife.

We took lunch in No.1 hide, which provided welcome shelter from the strengthening wind. The party then split into two groups. The first group, following the trail round the loch, were rewarded with sightings of Great Crested Grebes (including some adolescents) and Dabchicks. Hairy Curtain Crust fungus, *Stereum hirsutum* was also found.

The other group, preparing to set out on the Birchwood Loop walk, had a close encounter with a female Sparrowhawk. The viewpoint provided a magnificent panorama across the Forth as far as North Berwick Law and the Bass Rock. Back at the start of the walk, we finally spotted the Raven that had been heard calling earlier.

While the excursion was aimed mainly at ornithology, plants of note included, Vipers Bugloss *Echium vulgare* Red Campion *Silene dioica*, Catsear *Hypochaeris radicata*, Small Bugloss *Anchusa arvensis*, Ragged Robin *Silene (Lychnis) flos-cuculi* all still in flower....and (remains of) Quaking Grass *Briza media*.

On the descent from the viewpoint, we saw the Yellow Stagshorn fungus *Calocera viscosa*.

Although we didn't see any of the hoped for Scandinavian thrushes, we did have an excellent excursion and thanked Joanie before retiring to the warmth of the café to see what pictures the cameras were transmitting live from other parts of the reserve.

Pauline King

MUSSELBURGH

19 November

Vladimir Krivtsov

This was definitely an urban wildlife walk, and the route Vladimir had planned took us from the car-park behind the Brunton Theatre, up one side of the Esk, across the so-called Roman Bridge, down to the mouth of the river and thence onto the 'lagoons' where ash from the nearby Cockenzie power-station has been dumped. We ended up, some of us, out on the mud-flats among discarded shopping trolleys revealed by the low tide

Not on the face of it the most promising of areas, but, as the records of the day indicate, below, there was plenty to see.

Wilma Harper

Flowering Plants

This particularly mild autumn has allowed many plants to continue to flower late. In fact, the party recorded a total of 70 species flowering.

Near the bridge (designed by John Rennie in 1806) we found Black Horehound *Ballota nigra* along with a fine specimen of Annual Nettle *Urtica urens*. At the edge of the dried up ash-bed, several interesting plants were seen. Of particular note was Reflexed Saltmarsh Grass *Puccinellia distans* and Lesser Sea Spurrey *Spergularia marina*. Along the verge, Melilot *Melilotus officinalis* was still producing good stands of flowers.

Near the bird hides, overlooking the lagoon ponds, we found the leaves of the umbellifer Alexanders *Smyrniolus atrum*. In several places, Guelder Roses *Viburnum opulus* were laden with ripe, juicy berries: a feast awaiting the arrival of Waxwings?



Guelder Rose

We found the Alsike Clover *Trifolium hybridum* with its branched stems and slightly pink flowers, as well as the ubiquitous but similar White Clover *Trifolium repens*. Some crucifers appeared to be having a second flowering

period: these included Hoary Cress *Lepidium draba* and Shepherd's Purse *Capsella bursa-pastoris*.

Roger Holme

Bird Life

The bird life on the Esk between Fisherrow and Musselburgh, could best be described as cosmopolitan. There was an intermingling of thousands of birds, all taking advantage of the availability of food from human sources. Most numerous were the smaller gulls, largely Black-headed with fewer Commons. One or two Black-headed Gulls were already showing black heads, which in normal winters doesn't happen until January.

Mute Swans of all ages were boldly demanding food from passers-by, often with Canada Geese as accomplices. Greylag Geese and Mallards, also numerous and fearless, were never far away. A few Moorhens slipped in and out of the melee, obtaining their share of titbits. One 'redhead' Goosander stayed well clear of the aquatic turmoil by paddling up stream. We were even entertained by several Pied Wagtails and, uncommonly, a daring Dipper, which scooted between the bridge arches to find a few boulders from which to launch itself into the ripples.

As we neared the river mouth, where the salt water and the fresh merged, Goldeneye became the commonest duck. The ones we saw were all brown headed (i.e. females and immatures). They are of course divers not dabblers and the river is deep enough for them to feed only downstream of the town. As the mud-flats replaced the riverbank lawns, wading birds became frequent, probing for food both singly and in groups, but all in constant motion in concert with the tidal ebb and flow. Oystercatcher, Curlew and Redshank were most numerous, but Bar-tailed Godwit, Knot, Dunlin and Turnstone all high-arctic breeders, burst onto the scene in groups of between ten and a thousand whenever a threat (unseen to us) occurred.

East of the Esk mouth, a land-reclamation project has been in progress for many decades. Behind a concrete sea-wall, ash from the furnaces of Cockerzie Power Station, has been pumped, in the form of a slurry, into a string of lagoons. Some are still active, but others have been landscaped and are now wooded mounds. There is a boating pond and, close-by, behind a screen of trees, a series of 'scrapes' which make a well visited bird-reserve.

We stopped for a sunlit lunch by the pond, watching a score of model yachts electronically guided around a complex circuit. I secretly hoped that the Mute Swans pushed into one corner, would attack the interlopers, but no such excitement ensued.

We had a quick tour of the bird hides overlooking the scrapes, but because the tide was low, there were few birds. However we did notch up Teal, Wigeon, Lapwing and half a dozen Grey Herons.

Our return to town following the sea-wall was constantly interrupted, despite Vladimir's strict timetable. Strangely, all the Goldeneyes on the sea appeared to be male. It is known that the males of many duck species pay little attention to females outside the breeding period. Thus bachelor gangs are often seen. Eiders are notable in this respect. Our main attention was focussed on a few Long-tailed Ducks: the drakes have elegant pied plumage, a slim profile and distinctive flight. Two Slavonian Grebes, now one of Scotland's rarer breeding birds were diving close inshore. Small groups of Velvet Scoters were further out, quite distinguishable from other scoters, even at a distance, and particularly in flight, with their large white wing patch and surprisingly red feet. Further delays were induced by Rock Pipits and Turnstones at the base of the sea-wall, but we eventually caught up with the botanists (there's a turn-up!) while the sun was still above the horizon.

Hybridisation among Geese

Among our native goose species, only the Grey Lag has forsaken the migratory life style in large numbers. Other species migrate to Britain from higher latitudes where they breed, to winter in large flocks in our countryside. There may be numerous reasons for this change in behaviour: these could include domestication for breeding and wildfowl collections, followed by escapes: greater toleration by people: availability of food in urban and suburban locations.

Another species, the Canada Goose, feral in Britain, has had its migratory pattern broken by importation from North America. Here it is now a breeding resident in growing numbers.

(Although both species are presently widely tolerated, the Canada Goose is increasingly regarded as a nuisance in urban settings and in the wild is seen as a threat to other breeding waterbirds: the Greylag is also being recognised in similar terms.)

As a consequence of this recent history, both these species are semi-tame and present together in habitats close to man, such as we observed on the Esk. Thus there is social contact and the opportunity for hybridisation to occur. The progeny of these crosses are liable to be infertile, as the species boundary is quite wide, and so the gene pools will remain fairly distinct.

We saw one mixed family party with a parent of each species and four immatures showing a wide range of intermediate characters in their plumage. They probably went unremarked by the large number of folk carrying bags of white, sliced bread.

We did notice at least two other hybrid geese along the river, but they defied our attempts to identify their parentage, other than in very general terms.

Neville Crowther

YELLOWCRAIG TO NORTH BERWICK

3 December

Sue Crowther

It was cold, with a strong westerly all day, but remained sunny and dry. Thirteen of us met at Yellowcraig to be joined by Neville a little later. He had taken a car to North Berwick to ferry drivers back at the end of the day. By that stage, people had been combing the wood for fungi and had found a reasonable number. *Heterobasidion annosum* grew on stumps. The most unusual find was a fruiting body saprophytic on buried Sitka Spruce cones. Someone described it as 'a submarine with a periscope'. Sadly its identification could not be verified, because someone contrived to lose the contents of her binocular case in which it was being carried. It was likely to have been either *Auriscalpium vulgare* or *Baeospora myosura*.

In the wood, among the nettles, Red Campion *Silene dioica* and Ground Ivy *Glechoma hederacea*, we found widespread plants of a fairly recent introduction, Yellow Figwort *Scrophularia vernalis*, native to the mountains of southern and central Europe but now found commonly on both sides of the Forth in its UK stronghold.

We climbed the Yellow Craig itself, a conical hillock on the northern edge of the wood. It is described as the worn down stump of a volcanic vent 340 million years old. From the agglomerate platform on its summit can be seen similar stumps from the same complex of vents, Fidra, the Bass Rock and North Berwick Law.

Seeking the warmth of the sun, we stepped out into the dune grasslands, where we found many of the attractive gill fungi, characteristic of unimproved grassland. The waxcaps, Blackening, Snow and Parrot *Hygrocybe conica*, *virginea* and *psittacina* were easy to recognise, as were an attractive dark *Entoloma* *E. chalybeum* v *lazulinum* and Wood Blewits *Lepista nuda*.

Remarkably, considering the late date, many herbs were still flowering, and we noted Thyme *Thymus polytrichus*, Mouse-eared Hawkweed *Pilosella officinarum*, Centaury *Centaureum erythraea*, Viper's Bugloss *Echium vulgare* and even a single flower of Harebell *Campanula rotundifolia*. Dog lichen *Peltigera canina* a prominent lichen of dune grassland was abundant here, as was an invader once restricted to England, Blue Fleabane *Erigeron acer*, some still flowering.

In a disturbed area where we think Sea Buckthorn had been uprooted recently, we found many opportunist plants, some well known agricultural weeds. They included Woody Nightshade *Solanum dulcamara*, Field Pansy *Viola arvensis*, Ragwort *Senecio jacobaea* and Weld *Reseda luteola*. Small Mallow *Malva pusilla* was a rarity found on a steep wall of a dune.

The pace picked up as we dropped down onto the beach backed by the chill wind. We soon found a lunching spot, where we were periodically given a skin exfoliation by the blown sand.

Afterwards, two skeins of Pink-footed Geese flew overhead, the first southwards around 140 strong and the second to the north numbering about 30. Several species of wader entertained us during the rest of our walk. Turnstones probed the seaweed, Bar-tailed Godwits, Redshanks and Curlews waded in the shallows, a couple of Grey Plovers looked forlorn, and Ringed Plovers and Sanderlings were busily on the move. A pair of Stonechats was notable, as their population in the UK has crashed in the last two severe winters. They flitted back and forth along the shoreline often in company of Meadow Pipits and Pied Wagtails.

We eventually reached North Berwick and, as we approached the harbour and the Seabird Centre, found a

lone Tree Mallow *Malva (Lavatera) arborea*, in defiance of the displays and literature inside describing recent attempts to eradicate the species from the nearby islands and stop it from overrunning the Puffins' burrows there.

The coffee was excellent, and we met Mary Tebble who conducted some of us round the exhibits in the photographic competition. A lovely way to finish the day.

Sue Crowther

RATHO AND CHRISTMAS LUNCH

28 December

Janet Watson

The weather forecast was not too bad, mentioning the possibility of a shower and sunny intervals, and so, when 18 of us met at Ratho, we set off cheerfully enough, with a view to walking along the canal westwards. Those who wanted a two and a half mile circular walk would turn off and walk back behind the Ratho Climbing Wall.

Almost as soon as we set off, the rain started, and the pace of half of the party quickened to the fastest ever seen on a Nats walk. After a short pause at the turn-off

point, and no sign of the others, we continued to the aqueduct. We admired (only briefly) the magnificent view of the River Almond below us before turning back.

A five-minute respite from the rain, together with a glimpse of the sun revived our spirits. We found that, between us, we had seen a Buzzard, a Kestrel, a Heron, two Goosanders and a Dipper.

The rain began again before we got back to the turn-off point, and so we opted to return along the canal, which was more sheltered. We met the other group at the Ratho Park Inn, where some were recovering with coffee. They

had completed the circle and had found 17 species of plant in flower! These included Strawberry *Fragaria vesca*, which was amazing for this time of year. Rather more seasonal was a large clump of Snowdrops *Galanthus nivalis* in full flower.

Mary was pleased to find a rust on Red Campion *Silene dioica* and also the fungi Velvet-Shank *Flammulina velutipes* and Candle Snuff *Xylaria hypoxylon*.

There were 20 of us for the lunch: it was good value, and being self-service, we were able to take our time and move around to mix and chat.

Janet Watson

ABERDEEN 4-8 July

FOWLSHEUGH

4 July

After an easy drive from Edinburgh, most folk arrived within the suggested hour. The warm, sunny weather was so welcome and lasted for the rest of the day. The coastal grassland was bright with flowers, and sea-birds were in profusion. Initially, however, we were distracted by passerines: hirundines flew low over the cliff edge: in the whins, Linnets and Whitethroats were actively feeding their families. Molly even found *and saw* a Grasshopper Warbler. Soon, the huge numbers of seabirds became the focus of our attentions. Gannets, presumably from the Bass, fished offshore, and large numbers of Herring Gulls fed on the sea in rafts of 40 or 50. Beneath the surface, but clearly visible from the clifftop, were enormous swarms of jelly fish. Whether these had any attraction for the gulls it was hard to say. But for a few large, rust-coloured ones, these were all medusas (the free-swimming, reproductive stage) of the Common Jellyfish *Aurelia aurita* transparent saucers, each with four purple, horseshoe-shaped gonads.

We were afforded wonderful, close-up views of the cliff-breeding seabirds. Most notable were the auksGuillemots, Razorbills and Puffins: many on their breeding ledges, others on the sea far below, but still clearly seen below the surface as they dived deep, probably for sand eels. Kittiwakes and Fulmars, surface-feeders, were the most aerobatic. The former had well feathered young, some already flying. Fulmars still had downy chicks. Shags were not numerous, but we recognised several of their characteristically untidy nests of sticks and seaweed, often with ugly, downy nestlings.

The coastal vegetation was a constant diversion, with Thrift *Armeria maritima*, Sea Campion *Silene uniflora*, Wall pepper *Sedum acre*, Scurvy grass *Cochleria officinalis*, plantains *Plantago maritima*, *lanceolata* and *coronopus* all widespread. There were also small patches of coastal grassland dominated by Crowberry *Empetrum nigrum* and Tormantil, *Potentilla erecta*. Common Blues, Ringlets and Meadow Browns danced among the flowers, together with colourful Six-spot Burnets, just emerged from their pale yellow cocoons.

In late afternoon several of us were compulsively drawn to watch a Bonxie killing a Kittiwake by partially drowning it before plucking it and devouring its flesh while still bobbing about on the waves.....a lesson in nature's reality.

We set off for our accomodation in Dyce, situated on the other side of Aberdeen and, unfortunately, accessible only via the ring-road with its lines of slowly crawling, rush-hour traffic.... a lesson in urban reality.

Neville Crowther

MUIR OF DINNET

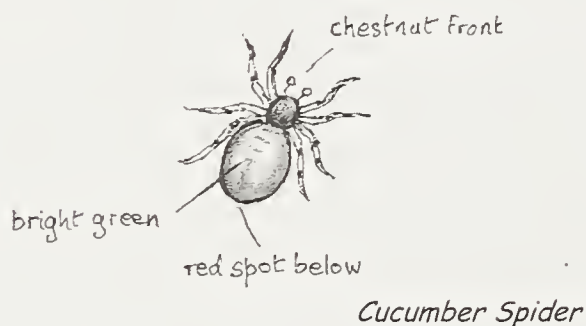
5 July

Between the Loch of Scene and Peterculter, on the drive to the Muir of Dinnet, we were fortunate to see two Red Kites quartering rough grassland. This was quite close to the release site at Anguston Farm, which we visited later in the week.

We met at the small but interesting visitor centre at Dinnet and began by walking to the Burn o'Vat. This is a massive, eroded swirl-hole created by the burn, much swollen by glacial meltwater during late glacial times. In the Birch-Pine woodland which flanks the burn are many interesting micro-habitats, including swampy pools with frogs and toads: shaded grassland with Chickweed Wintergreen *Trientalis europea* and Violets *Viola riviniana*: small Sphagnum mires with Heath Spotted Orchid *Dactylorhiza maculata*, Round-leaved Sundew *Drosera rotundifolia* and Star Sedge *Carex echinata*.

The 'Vat' is a deep hole in the granite, almost blocked by a boulder choke. The burn drops about 20m into the chamber which is about 40m in diameter. The granite walls have been smoothly undercut by the eddy over many centuries, giving a bell-shaped cross section.

For the rest of the day, most of the party decided to follow the path round Loch Kinord in an anti-clockwise direction, a major attraction being the number of dragonfly species previously recorded here. A ruinous farmstead and a clearing in the birches gave us a pleasant spot for lunch. Between sandwiches we found Cucumber Spiders *Araniella cucurbitina* guarding their egg capsules, early instar caterpillars of Emperor moth on Heather and some Cherry Ermine moths. Resuming the walk, we spent time unproductively looking for *Odonata* at the pools



on the south side of Kinord. We were compensated by seeing family parties of Redstarts and Tree Pipits where the woodland became more open. Where there was heath and grassland, we found Yellowshell, Chimney Sweepers and Common Heath moths. Under the Birches, there were larger areas of Common Cow-wheat *Melampyrum pratense* than I had ever seen, and yet more Chickweed Wintergreen.

A large flock of Greylag Geese browsed away on the lochside grassland, and Common Sandpipers flew from us on quivering, bowed wings. A cleared area of woodland had acquired a flora typical of set-aside. Whether this was intentional we know not. The tallest herbs were Great Mullein *Verbascum thapsus*, Teasel *Dipsacus fullonum* and thistles. Parsley-piert *Aphanes arvensis* agg, Doves-foot Cranesbill *Geranium molle* and Wild Pansy *Viola tricolor* gave interest to the ground layer.

About this time we bumped into Jackie's and Mary's squad coming the opposite way. Denis had identified a restaurant in Peterculter for dinner, and as time was passing, we increased our pace back to the car-park.

Neville Crowther

YTHAN ESTUARY

6th July

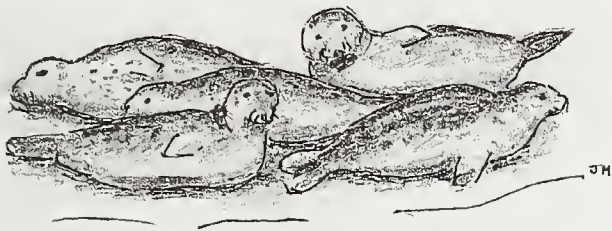
The Ythan Estuary lies about 12 miles north of Aberdeen. Now, it is a designated SSSI, a Ramsar site of international importance and a Special Protection Area. Meanwhile, north of the estuary, extend the Sands of Forvie, now a NNR, one of the most extensive sand-dune formations in Britain: some of the dunes are more than 200ft high. There is a mixed breeding colony here of Sandwich, Arctic, Common and Little Terns: their numbers vary from year to year. The estuary also holds probably the largest breeding colony of Eiders in Britain and about 50 breeding pairs of Common Shelducks.

Ecologically, the area east of the river is considered one of the most significant coastal moorlands in Scotland. Also, excavations here have revealed hearth structures and other artefacts of a Stone Age settlement. More recent remains include the corroded cases of spent shells: during World War 2, the area was used as an army training ground.

In the morning, we parked by Newburgh golf-course and walked across the dunes to the river, about quarter of a mile from the mouth. Inspired by Baxter and Rintoul, I first came bird-watching here about 60 years ago and, visiting it today, was struck by how little the place and its wildlife appear to have changed in all that time. In the dunes and dune scrub we saw Reed Bunting, Yellowhammer, Skylark, Whitethroat, Linnet,

Greenfinch, and Meadow Pipit, many giving territorial song and display flights

At the estuary, the enormous dunes of golden sand on the north side were reminiscent of the Sahara and seemed to brighten the overcast morning. We saw hundreds of terns in the colony there and feeding in the estuary: they were mainly Sandwich, with a few 'commics'. Best of all were two Little Terns. On the water, there were a couple of hundred Eiders, and hundreds more were loafing on the far bank.



Grey Seals on the beach

A King Eider had been there a few days previously, but was not to be found, despite prolonged scanning among the flocks. The bird was one of an extraordinary flurry of rare ducks that had appeared along this coast during the previous week, the others being an American White-winged Scoter and several drake Surf Scoters, a few miles south at Murcar among the huge flocks there of Eiders and Common and Velvet. Scoters

We walked to the mouth to see the congregation of Grey Seals on the other side. There were about 200 there,, and we admired their rather mournful chorus. Also at the mouth were 60 Cormorants, and we saw Dunlin, Ringed Plover, and Oystercatcher.

From the estuary we headed to the Waulkmill Hide, about a mile upriver. The hide overlooks mudflats, the Geck island and, on the other shore, an area of saltmarsh at the mouth of the Tarty Burn. It provided a convenient place to eat lunch out of the rain which had just come on. Waders seen from the hide included Curlew, Lapwing, Bar-tailed Godwitone in summer plumage (see below) and we also saw Mallard, Wigeon, Teal, Shoveler and about 150 Shelducks.

Tom Delaney

ALTERNATIVE ITINERARY

For one party of Nats, the day began with a fruitless search for sunglasses, and so we arrived at Forvie late and in need of coffee. There was none at the Visitor Centre so we returned to one of the hotels in Newburgh and, once revived, made a brief visit to Inch Point before heading for the Waulkmill Hide.

Here we found Tom, who was enjoying his lunch and a quiet scan of the estuary. He was foolish enough to mention that he had seen a Bar-tailed Godwit in summer plumage and consequently had to spend the next age trying to explain to a noisy party of Nats* just where it was on an expanse of rather featureless mud. After ten minutes, culminating in his declaration that he had lost the will to live, the bird was eventually captured in the telescope, and we all had a good view. Thanks and apologies to Tom.

By the time we had all seen the bird and had lunch it was raining heavily, and we decided to return to Aberdeen. After a further, and eventually successful, hunt for sunglasses, the rain stopped, and we took a short walk in the wood behind the College's Hall of Residence. It must once have been an arboretum, as, among the native species, there were quite a few unusual trees, many of them labelled.

Jackie Muscott

** It is not clear what this group had had with their coffee.*

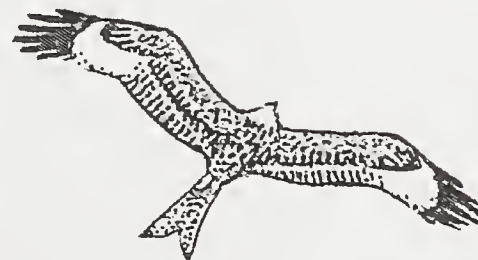
Tom Delaney.

EASTER ANGUSTON FARM

7 July

Neville Crowther

We had recorded two Red Kites near Peterculter in previous days, and so the chance sighting of an RSPB signpost to a farm showing CCTV footage of a kite nest and young led us to



Easter Anguston farm.

Red Kite

It was an interesting establishment, which combined a small farm, a market garden, nature

trails and conservation areas as well as supporting work opportunities for handicapped young people. Sadly we saw no kites there, despite over 100 fledglings having been released in the area in the three years to 2009.

However, on our rambles, we found a small pond constructed for its educational value, and planted with a wonderful collection of aquatic plant species. We were initially attracted by tall stands of Reed Mace *Typha latifolium*, Greater Spearwort *Ranunculus lingua* and Reed Canary Grass *Phalaris arundinacea*. Closer examination also revealed Water Mint *Mentha aquatica*, Marsh Cinquefoil *Comarum (Potentilla) palustris*, Yellow Flag *Iris pseudocorus*, Broad-leaved Pondweed *Potamogeton natans*, Common Valerian *Valeriana officinalis* and the Branched Bur-reed *Sparganium erectum*. The pond was surrounded by a meadow which had a large number of flowers including orchids.

Time had passed quickly and despite the blandishments of the farm shop the convoy was at last re-assembled for the trip to Glen Tanar.

Neville Crowther

GLEN TANAR ESTATE

7 July

Glen Tanar Estate on Royal Deeside is a National Nature Reserve. It covers 25,000 acres and contains remnants of the Caledonian Pine forest, as well as a wide range of other habitats. It and the nearby Muir of Dinnet NNR lie on the easterly boundary of the Cairngorms National Park, whereas last June we covered reserves in the centre and the west of the National Park.

A short walk round the Juniper Trail showed us massive ancient Pines, plenty of Juniper *Juniperis communis* plus Red Berried Elder *Sambucus racemosa*, Aspen *Populus tremula* and Birch *Betula pendula*. When the sun put in an appearance, so did our first Dark Green Fritillary.

Once everyone had arrived, we picnicked by the Visitor Centre, an old cottage in the process of considerable refurbishment. Here we had close views of a Common Hawker dragonfly *Aeschna juncea* in the grass and, more distantly, of Pied Flycatchers on a fence.

Our route for the afternoon was The Fairy Lochan Trail. As it is waymarked with a Dragonfly symbol, we were hopeful of seeing some Odonata. Tuesday, which should have been the star day for dragonflies, had disappointedwonderful-looking habitat, but no sunshine, and nothing flying.

On the way to the Lochan, we passed the fine Chapel of St Lesmo, built in 1870 by an eccentric Manchester lawyer and MP. He gave up city life to devote his time to building the chapel. Built of local granite, it is still in use today.

In the vegetation by the lochan, which included a nice stand of Marsh Cinquefoil *Comarum (Potentilla) palustre* in flower, we found Common Blue, Emerald and Large Red damselflies and Four-spotted Chaser dragonflies, but the blinks of sunshine were too short to produce general flying.

Following the path by the river on the way back, we noticed Meadowsweet *Filipendula ulmaria*, Rosebay Willowherb *Chamerion angustifolium* and Wood Sage *Teucrium scorodonia* already in flower

My image of the day is a Four-spotted Chaser sitting like a jewel on Sue Crowther's hand.

Lyn Blades

FORVIE

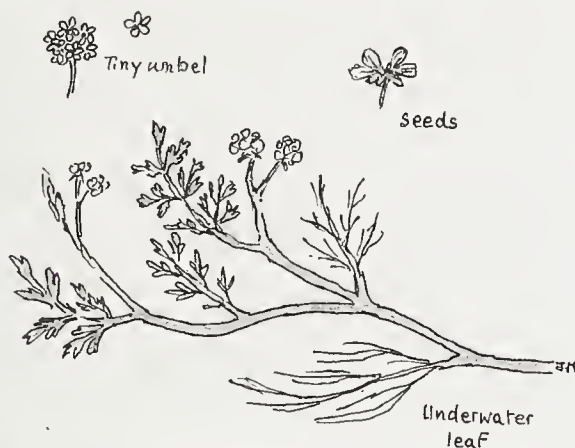
7 July

Since we had not actually set foot on Forvie Sands the previous day, and the weather seemed set fair, our little party decided to return there on Thursday. We started the day at Newburgh Links to see the birds and seals (which were still 'singing') and then spent some time in the slacks behind the dunes. The area was quite rich botanically, with Northern Marsh Orchids *Dactylorhiza purpurella*, Creeping Willow *Salix repens*, Kidney Vetch *Anthyllis vulneraria*, Thyme *Thymus polytrichus*, Small Cudweed *Filago minima* and a lovely patch of Adderstongue Fern *Ophioglossum sp.*

The dune slacks were relatively sheltered, the sun was coming out, and so Six-spot Burnet Moths *Zygaena filipendulae* and a couple of

Dark Green Fritillary butterflies *Argynnis aglaja* put in an appearance before we left.

Finally, we were heading for Forvie, where we 'did' the Heath Trail. We started off through Heather *Calluna vulgaris*, Cross-leaved Heath *Erica tetralix*, Crowberry *Empetrum nigrum*, more Creeping Willow and a patch of Stagshorn Clubmoss *Lycopodium clavatum*. In damper areas there was Narrow Buckler Fern *Dryopteris carthusiana* and, by the various ponds, Shore Weed *Littorella uniflora* and Lesser Marshwort *Apium inundatum* as well as more familiar plants like Ragged Robin *Silene (Lychnis) flos-cuculi* and Bogbean *Menyanthes trifoliata*. There were



Lesser Marshwort

also patches of Hemlock Water Dropwort *Oenanthe crocata*, well-chewed by the caterpillars of the micro-moth *Depressa dancella*, a few of which were still visible. *Oenanthe* is highly poisonous, and this moth specialises on it, just as the Cinnabar Moth specialises on poisonous Ragwort.

Unidentified blue damselflies were noted (probably *Enallagma cyathigera*), quite a lot of Small Heath butterflies *Coenonympha pamphilus*, and a few Common Blues *Polyommatus icarus*, Green-veined Whites *Pieris napi*, Dark Green Fritillaries and Six-spot Burnet moths.

We got within sight of the sea but had no time for a cliff-top walk, though somehow we did manage to find time for a cup of tea in Newburgh.

Jackie Muscott

CATTERLINE AND JOHNHAVEN

8 July

Today, we took our various ways home, and our carful stopped first at Catterline, determined to identify the little yellow flower Eunice had been bothering us with (a small, miserable specimen of Charlock *Sinapis arvensis*, looking more like itself on the cliffs above). Catterline is where the painter Joan Eardley spent the last years of her life, and the scenery is spectacular.

A steep road leads down to the quay where one comes face to face with the most amazing cliffs and stacks, all made of 'pudding stone' – smooth, rounded boulders embedded in a rock matrix. House Martins have taken advantage of shallow holes where



Sand Leek

some of the smaller boulders had fallen out – all you have to do is plaster up the front and you have a cosy nest. It was quite difficult at first to distinguish the nests from the boulders, but they were slightly different in colour (and the birds were going in and out). Agrimony *Agrimonia eupatoria*, Burnet Saxifrage *Pimpinella saxifraga*, Carline Thistle *Carlina vulgaris* and, Kidney Vetch *Anthyllis vulneraria* were to be found on the more vegetated cliffs, with Hemp Agrimony *Eupatorium cannabinum* in damper areas.

We had lunch (crab soup) at the pub high above the cliffs and watched a team harvesting what appeared to be potatoes in a field some distance away. We were soon informed that it was daffodil bulbs that were being dug up, ready for sale later in the year. A Yellowhammer was singing nearby, and six or seven butterflies on a bush in the garden attracted our attention and proved to be Red Admirals *Vanessa atalanta*.

Reluctant to leave the coast on such a sunny day, we stopped off at Johnshaven. Mary Clarkson was anxious to find the Sand Leek *Allium*

scorodoprasm which grows in some profusion there, perhaps its only native site in Scotland. It is heavily infected by a rust *Uromyces ambiguus* for which there are rather few records, so Mary took a specimen. There were lots of butterflies



flying in more sheltered areas: Meadow Browns *Maniola jurtina*, a couple of Ringlets *Aphantopus hyperantus*, some Common Blues *Polyommatus icarus* and a Small Tortoiseshell *Aglais urticae* plus a quantity of Six-spot Burnet Moths *Zygaena filipendulae*.

Eventually we had to tear ourselves away and head for home. On one

Six-spot Burnet Moths

of the minor roads we were delighted to see Thrift *Armeria maritima* spreading along the verge, no doubt a result of winter road-salting. It's prettier than the Danish Scurvey Grass *Cochlearia danica* which is so widespread, and more conspicuous than the Lesser Sea Spurrey *Spergularia marina* which is becoming almost as common.

Jackie Mnscoff

ST CYRUS NNR

8 July

We left Aberdeen in thick sea mist, and it looked as though the weather had beaten us again. But, as we approached St Cyrus, out came the sun, and we were rewarded with a lovely morning walk through the reserve with lots of flowers and butterflies to admire.

Starting through the dune area towards the sea, we found many plants among which was one of the specials, Clustered Bellflower *Campanula glomerata* in good form. Inland a bit, on the flatter grassland, we admired clumps of Maiden Pink *Dianthus deltoides* another special. As we approached the cliffs on the landward side of the reserve interest switched to birds. There we had splendid views of the Peregrines. Three adults were circling around, and in one or two niches in the cliff face a light-coloured chick was just visible.

After lunch we set off for home. The good weather held until just north of the Bridge. The sky over Edinburgh was an ominous grey: soon the heavens opened, and the roads were under water. Later we heard of flooding in the south of the city.

Lyn Blades

A fuller account of the habitats and plants in the reserve was given in Dorothy Hay's report of our excursion there last year, see Journal 2010, p32



OBSERVATIONS 2011

JANUARY

9	5 Jays near Corstorphine Hill tower: Heron on apex of house roof in nearby Kaimes Road	DA
14	Siskins on feeders in our garden at Lasswade... first appearance this year	TD
15	Large number of <i>Clitocybe geotropa</i> near Dalmeny House: same fungi seen on 14th November before the snows	DA
19	Tawny Owl heard in back garden, about 11pm	JMcN
21	Half a dozen Redwings feeding among leaf litter on the back green	JM
23	A mixture of 10 Goldfinches and 6 Greenfinches in a flock on tree across the road from the house	JMcN
29	In our garden at Lasswade 3 Roe, sampling the foliage of all the shrubs	TD
30	Siskins on feeders. Dunnock also on feeder; strange behaviours these days!	JMcN

FEBRUARY

1	At Astley-Ainslie, after rain, a rainbow, complete with secondary, both entire	JM
5	Sparrowhawk circling high over Relugas Road, disturbed lots of little birds, scattering all around it.	JMcN
7	Bramblings (1m and 1f) been visiting garden every day since December 201	JMcN
10	A mixed flock of Goldfinches and Long-tailed Tits near Dunsapie Loch	JM
	Herons returning to their nests at Duddinston	JM
12	Yellowhammers (5) feeding on the lawn on food spilt from feeders: first appearance for two years	TD
19	Mealy Redpoll in Loanhead garden	TD
	Large dog Fox in back garden. Scarpered as soon as my camera appeared!	JMcN
	3 Red-legged Partridges in grounds of Marie Curie Hospice	JMcN
22	Several sightings of Black Grouse in the Moorfoots, from Broad Law south to Innerleithen. Strangely, out of around 16 birds none was a Grey Hen.	NC
25	4 male Blackbirds taking it in turn to feed off a fat cylinder on the back green - and not fighting	JM
26	A pair of Little Grebes on Blackford Pond. Grown young were seen on 14 th October, and so they had succeeded in breeding.	JM
28	Another of Tom Dougall's colour-ringed Dippers on the Leithen Water in the Moorfoots: ringed as a pullus 2 years ago.	NC

MARCH

1	Stunning display of Crocuses in the Meadows, all along Melville Drive. Brings joy to the heart after all the snow	JMcN
4	Buff-tailed bumblebee on Helleborus foetidus. First of the year	JMcN

MARCH

- 5 In Thornielea Wood, Peebleshire, a large flock of Siskins feeding noisily in the conifers. Nuthatches were heard too JM, MC,Je M
- 6 At Loch Wood near Moffat, 2 Barn Owls in a hollow Oak JM
- 8 In a field at Kevock, gleaming black and white in the brilliant sunshine, a loose flock of a dozen Pied Wagtails following close behind a tractor and disc-plough and feeding on invertebrates exposed as it turned over the soil TD
- 15 About 50 Redwings feeding among the Crocuses, Melville Drive. JMcN
- 18 Raven, flying overhead SE-NW. JMcN
- 22 On Whitehouse Loan, my first butterfly of the year, a Peacock JM
- 22 First appearance of 3 bumblebee species *Bombus lapidarius*, *B pascuorum* and *B pratorum* in Corstorphine. *B terrestris* had appeared on 26 February. DA

APRIL

- 2 Chiffchaff singing, corner of Relugas Rd and Mayfield Road. JMcN
- 3 About half a dozen Waxwings still at Longstone, feeding on the last few berries of Berberis and on emerging Sycamore buds TD
- 10 From sunrise until mid-morning, along the Leithen Water, we saw a total of about 50 Black Grouse, including about 8 females. Red Grouse were not so numerous. Red -legged Partidge also present. Willow Warblers and Chiffchaffs were singing. A Goshawk flew over TD
- 10 First cuckoo bumblebee *Bombus sylvestris* in Corstorphine. The 6 common social bumblebee species had all been seen in the previous week. DA
- 14 Chiffchaff singing IN the garden. A first! JMcN
- 20 At Aberlady, an Emperor Moth tangled in a spider's web, dead, but still immaculate TD
- 21 At Mavisbank, a Stinkhorn, at the side of a path, kicked over but still whole. TD
- 22 First worker bumblebee of year *Bombus pratorum* in Corstorphine DA
- 25 At Roslin Glen, a pair of Nuthatches feeding young TD
- 25 At Mavisbank, two Wrens in a fierce tussle tumbled from the bank and landed at my feet. They carried on, trying their best to kill each other, totally oblivious of my presence. I poked them (gently) with a stick, and they flew off in opposite directions. TD
- 25 At the southwest end of Torduff Reservoir, on a steep, south-facing bank with patches of, blaeberry and gorse, 8 Green Hairstreaks basking on dead Bracken: quite tiny, inconspicuous in flight, but vivid emerald and highly visible when they settle TD
- 26 On the Ormiston-Pencaitland path, a Garden Warbler TD
- 30 A St George's Mushroom at Yellowcraig - only 7 days after St George's Day: early for Scotland JM

MAY

- 1 A Bird Cherry *Prunus padus* in Blackford Glen infected with Pocket Galls caused by a fungus *Taphrina padi* - every single fruit affected JM
- 8 7 Swifts, hawking and screaming, above the garden. First I've seen this year and, like last year (5th), quite early. JMcN
- 8 Chiffchaff singing in the garden again. JMcN
- 10 Blackbird (f) behaving like a hummingbird, taking fruity fatty treats from hanging feeder. JMcN

MAY

- 12 On Auchencorth Moss, in the small copse by the gas-pumping station, a colony of at least 30 Green Hairstreaks, surprisingly active on this cold, dull day TD
- 15 First male bumblebees of year *Bombus pratorum* in Corstorphine Hill walled garden DA
- 22 Starling. First one seen in the garden this millennium. JMcN
- 28 Starling seen last week was obviously casing the joint. He/she came back with partner and 1 juvenile. JMcN

JUNE

- 1 Grass Vetchling *Lathyrus nissolia* on Mansfield Road verge. MT
- 4 A wonderful stand of Dwarf Birch *Betula nana* at the SWT Reserve at Loch Ardingning. Quite the biggest stand ever seen by any of us. RH
- 14 1 Jackdaw on the bird table, another garden tick JMcN
- 24 At Aberlady, many Common Blues and Dark Green Fritillaries TD
- 25 All the members on Molly's walk were spellbound at the loud 'wet my lips' call of Quail in a wheat field north of Earlstoun JM
- 25 2-3 Blaeberry bumblebees *Bombus monticola* at Tantallon Castle, apparently far from any blaeberry plants: 10 bumblebee species found at Dirleton and Tantallon DA
- 28 Six-Spot Burnet Moth in Gyle playing field DA
- 29 Shaggy Soldier *Galinsoga quadriradiata* flowering well in Corstorphine. It's regularly sprayed, but keeps going. JM
- 30 3 Merlins in Pentlands: Spotted Flycatcher at Bavelaw: Grass Vetchling *Lathyrus nissolia* at Balerno DA

JULY

- 1 At Blindwells, squadrons of newly emerged Burnet Moths (spots not counted). Much fewer damselflies than last year and no dragonflies at all today TD
- 5 High Street. 4 LBBG roof-top nests, all with nearly fledged young. Seen from top flat (opp John Knox's House) JMcN
- 7 Plenty of Buff-tailed and Common Carder bees in the garden JMcN
- 10 Stinkhorn in garden at Lasswade TD
- 11 Wood edge, Blackness: Swallows feeding young in a tree - one bird getting all the food until a sibling flew out to intercept the parents JM
- 13 At Linn Dean, Dark Green Fritillaries, Small Tortoiseshells and Peacock butterflies TD
- 13 At Milkhall pond, Large Red damselfly TD
- 14 On Foulshiels Bing, several thousand flowering spikes of Common Wintergreen *Pyrola minor*, several hundred Twayblades *Neottia (Listera) ovata* and at least 40 Greater Butterfly Orchids *Platanthera chlorantha* JM
- Two-spot Ladybird in front garden: they are quite rare in this area JMcN
- 16 Many plants of Nodding Thistle *Carduus nutans* by Castlelaw earth house DA
- 18 On our Sutherland holiday in Glen Traligill, after several years of trying, we were delighted to find several spikes of Dark Red Helleborine in flower. Other less common sightings around 'the zoo' were Northern Bedstraws flowering prolifically, lots of blooming Scottish Asphodel in gravelly flushes with Variegated Horsetail and even a Large Heath butterfly. NC, SC
- 22 A male Skimmer dragonfly *Orthetrum coerulescens* near Loch Gruinart, Islay JM
- 22 Wood Tiger Moth in Harehope Forest near Eddleston DA

JULY		
25	<i>Amanita inaurata</i> fungi appear for the second year under Oak in car- park of Dougal Philips garden centre near South Queensferry.	DA
24& 26	Choughs on Islay	JM,MC JeM
26	Small Copper butterfly on dunes at Longniddry	TD
27	2 Cuckoos, 2 lizards and <i>Eriophorum latifolium</i> , all beside Baddinsgill Burn near West Linton	DA
29	Sparrowhawk circled overhead back garden for about five minutes before returning W	JMcN
31	Alpine Clubmoss <i>Diphasiastrum alpinum</i> , Fir Clubmoss <i>Huperzia selago</i> , and lots of Stagshorn Clubmoss <i>Lycopodium clavatum</i> on Whitrigg Bing At Drumlanrig Castle, a large horse fly, <i>Tabanus sudeticus</i> , joined our picnic briefly. On Heucheras in the back garden, another Two-spot Ladybird, this time <i>sexpustulatus</i> , with six red spots rather than the typical form which is red with two black spots	JM TD JMcN
AUGUST		
4	Many bumblebee species, plus Common Blue and Dark Green Fritillary butterflies in area of the Howe and Dens Cleuch, Pentlands. 7 Small Tortoiseshells on stand of thistles Whinchats, Stonechats, Wheatears and Ravens.	TD DA
17	On a single white Buddleia, in garden, in Lasswade, 5 Red Admirals, 3 Small Tortoiseshells, 4 Peacocks and 1 Comma, plus a couple of unidentified white butterflies	TD
20	Osprey over Belhaven Bay at Hedderwick Burn	JMcN
22	At St Abbs, 4 Wall Brown butterflies	TD
25	At least 6 Curlew Sandpipers on the mudflats at Tynninghame	TD
24	At the Musselburgh Scrapes, 1 Black-tailed Godwit, several Curlew Sandpipers and 5 Ruffs	TD
31	A group of 7 or 8 Crested Tits flew into a Pine in Inshriach Forest, Speyside, about 4ft from my nose... the best view of these I have ever had.	MC
SEPTEMBER		
5	Solitary Swift over garden, the last one?	JMcN
9	While doing the annual weeding of the ponds at Milkhall Reserve, we discovered several Great Diving Beetles <i>Dytiscus marginalis</i>	LF,KI, PMcI
14	60 Pink-footed Geese, first of the season, flying over garden	JMcN
15	<i>Stigmatula</i> (formerly <i>Polystigma</i>) <i>astragali</i> , a tiny ascomycete, on the leaves of Purple Milk-vetch <i>Astragalus danicus</i> at Gullane, Muirfield area. Identification was by Prof. Roy Watling, who also ascertained that this fungus was last found by the late Douglas Henderson at Longniddry on 25th August, 1953.	MC
22	Three Two-spot Ladybirds, <i>Adalia bipunctata</i> , melanic form: one red with 2 black spots (most common) and two black with 2 red spots	JMcN
26	In garden, Tortoiseshell and Peacock butterflies on <i>Sedum spectabilis</i>	JMcN
30	100 Pink-footed Geese flying east to west 0900. Then more half an hour later, same direction, too high to count. Followed by c 80 west to east at 1045	JMcN
OCTOBER		
10	St Abbs Head, a single Harbour Porpoise	TD
10	Towards dusk, a large number of Pink-footed Geese and several hundred Barnacle Geese on the mudflats at Aberlady Bay. Between 6 and 6.20pm, several massive flights of Pink-foots, possibly totalling about 30,000, flew in from the south and the east to roost.	TD

OCTOBER

- | | | |
|----|---|------|
| 12 | Five Goosanders flew upstream on the Fullarton Water at Cockmuir | NC |
| 13 | On Dere St. at the Ancrum Moor battle site, 3 Small Skipper butterflies, the first for that hectad and we believe the first for Roxburghshire | DA |
| 22 | First Wren for over two years, in the front garden | JMcN |
| 27 | Cauldhall Muir, Midlothian. 900 Fieldfares- winter arrivals | NC |
| 24 | Peacock flying over gardens, very fast, didn't stop | JMcN |

NOVEMBER

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|----|--|--------------|
| 5 | On a visit to the Upper Findhorn River, we watched 5 Salmon spawning in the shallows, oblivious of the presence of people only 5m away. | NC, SC |
| 7 | One Roe buck and 2 females in Atholl woods, Dunkeld. One female was pure white, a leucistic variant. | NC |
| 11 | Gosford Estate, a male Holly in flower; female counterparts bearing red berries! (Lots of plants are flowering late this year.) | JM |
| 16 | Lesser Black-backed Gull, eating from fish-and-chip wrapper in Relugas Rd. LBbs used only to be summer. roof-top nesters in the city, but now a few over-winter here while most go south.
Return of Collared Dove (two birds) to Relugas Rd after an absence of approx three years. | JMcN
JMcN |
| 26 | At the Botanic Gardens, probably the last bumblebee of the year, <i>Bombus terrestris</i> : also a Red Admiral and a male Blackcap. | DA |
| 29 | Female Blackcap on feeder in back garden. First for this winter: the male is usually first to arrive | JMcN |

DECEMBER

- | | | |
|----|---|------|
| 1 | 30 or so Waxwings beside St John's Church at the West End | |
| 3 | Male Blackcap seen this morning | JMcN |
| 4 | Leucistic Blackbird, a week earlier than the bird with exactly the same markings last year | JMcN |
| 14 | Flock of about 40 Fieldfares in a Cotoneaster in a neighbour's garden. | MC |
| 20 | Aconites starting to flower a week earlier than most years hitherto, when the first flowers usually appeared between Christmas and New Year. | EF |
| 31 | At Duddingston Loch, 8 Cormorants sitting on stones in the water and White Butterbur in flower: elsewhere in the park. Rockrose, Burnet Saxifrage, Viper's Bugloss, all in flower (just). | JM |

Observers: DA David Adamson: RH Roger Holme: SC Susan Crowther: JB John Ballantine:
 NC Neville Crowther : LF Lesley Fairweather : PMcI Phil McInnes : KI
 Kevin Ingleby :JM Jackie Muscott: JeM, Jean Murray: MC Mary Clarkson:
 MT Mary Tebble: TD Tom Delaney: MC Mary Clarkson: JMcN Joanie McNaughton:
 EF Elizabeth Farquharson

WINTER LECTURE PROGRAMME

21 Sept 2011

The craft of a wildlife artist

Colin Woolf

Colin initially qualified as a physiologist and worked for the Medical Research Council in the south of England. His love of art prompted him to study and work as a graphic artist, but wildlife art was his real passion. Eventually he moved to Wales and then Scotland to be near to his subject-matter- wildlife.

Deeply committed to wildlife art as a profession, he listed some key aspects of his *modus operandi*: strict number of working hours; production of paintings that will sell; pricing to cover costs and produce profit; not sentimental about his craft; not wasteful with materials, but meticulous with the selection of brushes and paper. He is a water colourist, using only a small number of pigments, all others being mixed on the palette....his tubes last for years!

Describing his methods of painting, he first studies the subject in detail, taking measurements and dimensions. He doesn't use museum skins but does use photography extensively. He targets the upper end of the market (minimum price for a work is about £400) and prefers big canvases because they pay more.

His subjects are largely birds and mammals, and his focus is mainly on the large species – game birds, owls and raptors for the 'country-set'.

Neville Crowther

19 October

Wildlife of the Carolinian Forest

NevilleCrowther

The speaker lived in south-western Ontario for several years in the 60s and has revisited the area many times since. The Eastern Deciduous Forest as it is known in the USA covers the eastern states from New England to the Carolinas, inland to Kentucky and Tennessee and north to the Great Lakes. The name given to this forest in south Ontario is the Carolinian Forest. Here it occupied the strip of the province north of the two smallest Great Lakes, Ontario and Erie, from the Detroit River to the Rideau Canal. Prior to 1700 it was the home to Native American tribes, now known as the First Nation Peoples, and had been little changed since post-glacial times. Longfellow's 'Hiawatha' and Fenimore Cooper's 'Last of the Mohicans' deal with tribes such as the Ojibway, Chippewa and Mohawks, who were ensnared in the conflicts created by the European expansion of the seventeenth and eighteenth centuries. Since then, 90 % of the Carolinian forest has been lost. About one third of the population of Canada now lives along the ribbon of country called Southern Ontario. The remaining areas of forest are preserved mainly in National, Provincial and local parks.

Although the hardwood trees and the flowers of the forest were illustrated in some detail, it was the bird-life that captivated the speaker. In particular, it was the period of three or four weeks in April to May when millions of birds were moving north along the Mississippi Flyway, passing through Southern Ontario, that had so astonished him as a young and recent immigrant 50 years before and reawakened his teenage interest in wildlife.

The speaker highlighted one particular family, the Parulidae or American wood warblers because of their varied, distinctive and colourful plumages. It was not uncommon on any morning during this season, he recounted, for his garden to be swarming with as many as 30 species of this family. And then they were gone! They mostly dispersed into the northern hinterland of Laurentian and Boreal forest, Muskeg and swamp.

The speaker showed pictures of other birds, some resident, others summer migrants, and gave a resume of the mammals of the forest and its swamps. By mid-May, the short Spring was over, and temperatures were in upper 30s celsius. Dragonflies and butterflies were on the wing, and tall flowers from the remaining patches of long-grass prairie were a colourful summer attraction, but, for the speaker, the spring bird migration would always be the highlight of the natural year.

Neville Crowther

Currently, Syd House is the Conservator for Perthshire and Argyll Region. Having worked for the Forestry Commission for most of his life, Syd has always been fascinated by David Douglas, one of Britain's most famous plant collectors, who was responsible for introducing a collection of over 200 species of exotic trees and herbs, largely from the temperate rain-forest region of the western Americas.

Born in Scone in 1799, Douglas became apprentice gardener at the Palace and then moved to the Botanic Garden in Glasgow where he excelled so much that William Hooker, Professor of Botany at Glasgow University, took him under his wing. After accompanying Hooker on expeditions to the Highlands, he was recommended to the Royal Horticultural Society, who engaged him to visit the Americas in 1823. Initially he travelled around the Great Lakes and the mid-west, but eventually sailed to the Pacific coast, where, during his travels in the Oregon territory and up the Columbia river, he collected many of the famous 'pines' for which he is best known. His return to Britain involved traversing Canada from the Pacific to Hudson's Bay before sailing back to Britain from York Factory (present-day Churchill) in 1827. He had walked and canoed over 10,000 miles in four years. His last voyage of exploration, begun in 1833, was to California and eventually to the Hawaiian islands, then an independent kingdom. His death there at the age of 35 was a mysterious affair. The most charitable conclusion was that he had fallen into a pitfall trap for cattle and was gored by the bovine occupant. Given that less than 50 years before, James Cook had been assassinated by 'Sandwich islanders', it may not be too much of a leap, to guess that a similar fate may have overtaken him, but no evidence of such a crime emerged.

Neville Crowther

ACKNOWLEDGEMENTS

We are grateful to the authors of all the articles, excursion reports and observations contained in this issue: without them there could be no *Journal*.

We are particularly indebted once again to Jackie Muscott for the many sketches drawings she has produced for this issue.

The drawings on the first page, at the head of the Excursions section, and others interspersed throughout these pages will again be recognised as the work of the late Eric Perry. We thank Eileen Perry for her kind permission to continue to use them.

This year, the photographs used in the centre-spread have been provided by Roger Holme (Treasure trove:) Joanie McNaughton (Drinker caterpillar: Cinnabar Moth), Tom Delaney (Antler Moth: Marmalade Fly: Grayling: Ruff: Spotted Redshank: Nuthatch) and by Neville Crowther who kindly provided the remainder.

We should like to thank all those who have provided much appreciated help with the production of this issue. Especial thanks are paid to Lyn Blades and Jackie Muscott for their eagle eyes and unfailing stamina in proof-reading.

THE SOCIETY'S EQUIPMENT

In addition to books held in the Library, the Society has the following items which can be borrowed by members for their private use.

Members are responsible for the care of equipment on loan

Telescope Bushnell Spacemaster 20-40x, in carrying case and with window-mount for in-car use.

Apply to Grace Jamieson: 0131 453 3434

Microscopes, high- and low- power.

Apply to Mary Clarkson: 0131 667 3815 and to Elizabeth Farquharson: 0131 447 1994

Small-mammal traps (24 available)

Apply to Elizabeth Farquharson: 0131 447 1994

Slide Projector

Apply to Elizabeth Farquharson: 0131 447 1994

Slide collection left to the Society by Janet Raeburn. The subjects are mostly botanical but also include birds, mammals, butterflies and Scottish scenery..

BAWSINCH

The Bawsinch Nature Reserve at Duddingston is managed by SWT, who allow the Society to hold a key for members.

Apply to Joanie McNaughton: 0131 477 0270

JOURNAL

Members who wish to submit material for the *Journal* should e-mail the Editor, David Fergusson, DFergusson@dfmac.demon.co.uk Members without internet access can send an e-mail from any Library: there is usually a Librarian on hand to help.

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